

UNITED STATES CULTURE AND ITS EFFECTS ON MILITARY POLICY  
REGARDING MORTUARY AFFAIRS

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General Studies

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## ABSTRACT

UNITED STATES CULTURE AND ITS EFFECTS ON MILITARY POLICY  
REGARDING MORTUARY AFFAIRS, by MAJ James R. Becker, 88 pages.

The U.S. Army mortuary affairs military specialty has continually evolved since its initial creation. Military requirements, politics, and the generally accepted United States culture have all played significant roles in this evolution. How these factors have affected the U.S. military policy regarding mortuary affairs is the heart of this thesis. Specifically, this thesis focuses on the cultural impact of U.S. military policy regarding mortuary affairs. It also addresses mortuary affairs related topics to better anticipate and meet the projected needs and demands of the U.S. Army from a cultural aspect.

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## ACRONYMS

ANOVA	Analysis of Variance
CGSC	Command and General Staff College
CGSS	Command and General Staff School
CIL-HI	Central Identification Laboratory – Hawaii
CJCS	Chairman of the Joint Chiefs of Staff
CMAOC	Casualty and Memorial Affairs Operations Center
COE	Contemporary Operating Environment
CONUS	Continental United States
CSA	Chief of Staff of the Army
DA	Department of the Army
DAD	Development and Assistance Division
DCIPS-MAATS	Department of Defense Casualty Information Processing System – Mortuary Affairs Automated Tracking System
DGDP	Directorate of Graduate Degree Programs
DoD	Department of Defense
DPMO	Defense Prisoner of War/Missing Persons Office
DPRK	Democratic People’s Republic of Korea
DTIC	Defense Technical Information Center
ETO	European Theater of Operations
FM	Field Manual
GDP	Graduate Degree Programs
GPS	Global Positioning System
GRREG	Graves Registration

GS	General Services
HQDA	Headquarters Department of the Army
JFC	Joint Forces Commander
JP	Joint Publication
JPAC	Joint POW/MIA Accounting Command
JRTC	Joint Readiness Training Center
JTF-FA	Joint Task Force-Full Accounting
JTTP	Joint Tactics, Techniques, and Procedures
MA	Mortuary Affairs
MCO	Major Combat Operations
METT-TC	Mission, Enemy, Terrain, Troops available – Time, Civilian considerations
MMAS	Master of Military Art and Science
M/NATO	Mediterranean/North African Theater of Operations
MOS	Military Occupation Specialty
NATO	North Atlantic Treaty Organization
NBC	Nuclear, Biological, and Chemical
ODCSLOG	Office of the Deputy Chief of Staff for Logistics
OEF	Operation Enduring Freedom
OFW	Objective Force Warrior
OIF	Operation Iraqi Freedom
PADD	Person authorized to direct disposition of remains
PNOK	Primary Next of Kin
POW/MIA	Prisoner of War/Missing in Action
PTO	Pacific Theater of Operations

QSTAG	Quadripartite Standardization Agreement
SD	Standard Deviation
TAG	The Adjutant General
TSC	Theater Support Command

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## CHAPTER 1

### INTRODUCTION

The purpose of this chapter is to provide an overview of U.S. Army mortuary affairs and how current cultural standards might impinge upon military policy. The chapter begins with the problem statement, a definition, and background of the problem, and discusses the initial development of mortuary affairs. The chapter ends by briefly examining the importance of a country's efforts concerning mortuary affairs in today's civilian and military culture.

#### Problem Statement

The problem facing mortuary affairs today is how to best balance the expectations of the U.S. military and civilian populace in the conduct of mortuary affairs operations, processes and procedures.

#### What Is Mortuary Affairs?

Mortuary affairs as a military specialty, and the personnel who conduct this mission, fulfill a need within the U.S. Army "to search, recover, tentatively identify, and coordinate evacuation of remains" (DA 1999, 1-1). Mortuary affairs, as we shall see in later chapters, has evolved over the last one hundred plus years as a military specialty. The U.S. Army's mortuary affairs specialty was initially formed during the U.S. Civil War, and designated the Quartermaster Cemeterial Division. As in the case of most needs, a necessity was presented, identified, and a solution to the problem was found. In the case of the U.S. Army mortuary affairs, the issue of how to deal with the remains of those who fell on the field of battle was solved in much the same way, albeit under

somewhat different circumstances and under more austere conditions. The solution involved the application of personnel, equipment/technology or whatever else was necessary to meet the requirement and overcome the problem. In this case the evolutionary process involved not only the U.S. military, but, several different militaries working this issue from the same general perspective, albeit with different cultural nuances.

Mortuary affairs is as much a product of this process as that of other specialties. For example, the advent of the canon, the tank, the aircraft carrier and their resident military applications were brought about through the aforementioned process and often took a lengthy amount of time to have evolved into their respective method of application in today's militaries. However, mortuary affairs seems to have developed in the United States as a result of both the military necessity (recovery, identification and burial of remains from the field of battle) and the personal desires and beliefs of its citizens. These desires and beliefs are now more commonly accepted as the cultural norm within the U.S.

To better understand this point, Merriam-Webster OnLine defines culture as: "the customary beliefs, social forms, and material traits of a racial, religious, or social group" (Merriam-Webster OnLine 2003). The challenge for mortuary affairs in today's U.S. Army is how to best meet the desires of today's U.S. Army personnel given the cultural beliefs in the United States. This, as we shall see in later chapters, is a problem for the U.S. military as the civilian population of the U.S. plays a significant role in this aspect of military culture.

The demands of the U.S. culture are best described in a paper by Timothy D. Ringgold, titled *Strategy Turned Upside Down: The Bottom-Up Review and the Making*

of U.S. Defense Policy. Ringgold states “U.S. military force design and the national security strategy are shaped by the interaction of a number of influences, most of which defy precise identification. These influences can be classified into three general categories: international political and military developments, domestic priorities, and technological advancements” (Ringgold 1996, 5). The statement suggests the most important three factors that affect the military force design and national security strategy, which in turn directly affect mortuary affairs, and to a lesser degree, the U.S. military remains recovery community.

Historically, the U.S. Government uses a myriad of agencies, to include the military branches, and close coordination with multiple civilian organizations to reach out to the primary next of kin (PNOK), other family members of service members, and civilians who have died while in the service of the U.S. government. Many of these agencies and organizations exist, for purposes to include the reverent search, recovery, tentative identification, notification, and burial, of the remains of these same personnel who died while in the service of the U.S. government. Organizations such as the Service Casualty Offices, the Joint POW/MIA Accounting Command (JPAC), as well as active duty U.S. Army mortuary affairs units and personnel perform some degree or step of this service. This service may include what the mortuary affairs field divides into the current death, concurrent death and graves registration programs, as well as the remains recovery from past wars and conflicts, through notification of the PNOK, and final burial processes (DTIC 2004).



### Value of the Study

We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that the nation might live. It is altogether fitting and proper that we should do this. But, in a larger sense, we can not dedicate – we can not consecrate – we can not hallow – this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced (Basler 1953-1955).

This is a well-known excerpt of the speech delivered by President Abraham Lincoln in 1863 at the Gettysburg national cemetery dedication ceremony, some four months after the battle. Many consider this speech as one of the most famous speeches in America's history for a multitude of reasons. One such reason is the reverence given those that had paid the final sacrifice for the ideals of their country. For nothing more than giving of one's life for the ideals of their country's continued existence can be asked. It is therefore of importance to determine how the living, and the government for which they fight honors their dead.

Arguably, how the United States honors its dead, and what it expects of its government regarding the same, does, in effect, assist in the make up of the cultural identity of the United States. How this cultural identity affects mortuary affairs, in both expectations of the U.S. citizenship of its government, and how the government has met, currently meets or anticipates this cultural demand, is the topic to be examined in this research.

### Conclusion

This chapter provided an overview concerning the development of the U.S. Army mortuary affairs and how current cultural standards might impinge upon military policy.

The chapter began with the problem statement and a definition of the problem and ended with a brief discussion on the importance of how the U.S. approaches the recovery of its military dead.

## CHAPTER 2

### LITERATURE REVIEW

This review of literature first provides a brief overview of mortuary affairs in the United States Army and United States military in general. Second, it reviews doctrine and policy and their development due to the wartime and peacetime implementation of emerging graves registration and mortuary affairs procedures. Third, it discusses the current challenges being addressed in today's mortuary affairs environment concerning the procedures, policies and practices of the same. Finally, this review presents several research questions and null hypotheses.

#### Brief History of U.S. Army Mortuary Affairs

In a Daily Mirror news article titled *Insult to the Fallen*, Paul Routledge begins by stating “you can judge a nation by the way it honours its war dead” (Routledge 2000). The significance of this statement, within the cultural environment of the U.S. military and the civilian leadership, stretches back to the beginning of our country and beyond. Because the United States of America as a country is relatively new in respect to other countries terms of existence, this paper will begin with the creation of the first U.S. military cemetery. This cemetery, in Mexico City, Mexico, was established by Congress in 1851, for those U.S. soldiers who died in the War of 1846-47, or the “Mexican War” (Holzer 2003, 10).

Following this initial establishment of the first U.S. military cemetery, which incidentally lay outside the borders of the U.S., Congress, in 1862, then approved legislation for the purchase of lands within the U.S. to be used expressly for those

soldiers who died in the service of the U.S. government. This Congressional decision, it must be noted, was made during the U.S. Civil War and resulted in the interment of dead from both sides (Steere 1951, 4).

This passage of this legislation also led to the beginnings of an actual Graves Registration Service through such things as the formation of the Quartermaster Cemeterial Division, and the development of a search, recovery and identification process. Even with the passage of this congressional legislation, the U.S. Civil War resulted in a rate of unknowns at approximately 42.5 percent. This high rate of unknowns would result in several key decisions in the coming years. These decisions, made in regards to the reinterment of remains into the newly created national cemetery system and a more accurate system of graves registration during the conduct of war would come to greatly influence what is now the U.S. Army mortuary affairs field (Steere 1953b, 1).

The greater importance of this legislation, however, lay in the respect that it seemed to signal a shift in the public expectations regarding military service and service member's burial rights. Dr. Steven E. Anders, in his article "With All Due Honors: A History of the Quartermaster Graves Registration Mission," wrote: "At the same time public sensibilities towards the treatment of dead soldiers appeared to be changing possibly in response to the sight of so many citizen soldiers donning the blue or gray" (Anders 1988, 21). This particular point is even more significant because the American Civil War accounted for more battle deaths than all the wars since, combined. Anders also points out that the morale of the soldiers was also affected, when he noted: "When the Union Army of the Potomac crossed the Rapidan River and entered Virginia on 4

May 1864, those soldiers were horrified to discover the bleached bones of comrades who'd fallen the year before lying exposed on the ground" (Anders 1988, 22).

Then in 1888 the process was taken a step further when Congress passed a law allowing "the next of kin to exercise the right of expressing a choice in the final resting place for servicemen who fell in the Spanish-American War" (Steere 1951, 2). Hence one can begin to see the formation of the cultural "right" to a service member's burial, whether abroad or at home, in one of many military or so designated civilian cemeteries.

In a 1953 *Quartermaster Review* article, Steere quotes then Quartermaster General, M. I. Ludington, who in 1899 stated that "the return of Spanish American War dead from Cuba and Puerto Rico for private burial by their relative, or for reinterment at public cost in a national cemetery, was probably without precedent in world history" (Steere 1953b, 1). This begins to show that the emerging U.S. policy was different from what countries were generally accustomed to. The return of remains from distant battlefields for burial on their native soil was previously impossible given the logistics of the operation. This was primarily due to a countries inability to transport their dead back to their homeland via overland or sea routes. A secondary issue was the possibility that the defeated or withdrawn country no longer had complete access to the scene of the particular battle (Steere 1953b, 1).

What General Ludington was referring to in his previously addressed statement were the instructions of President McKinley to the Secretary of War, directing him to ensure the effective marking of the location and names of all military graves in the Cuban theater of operations. President McKinley made this decision with the knowledge of the post Civil War reinterment of remains that had taken place less than twenty years earlier.

The reinterment of remains, occurring between 1866 and 1870, resulted in a lackluster 50+ percent positive identification rate.

The man tasked with this Presidential directive was D.H. Rhodes, an experienced Quartermaster official who not only completed President McKinley's directive but also subsequently organized the Quartermaster Burial Corps. In 1899, this group of civilian morticians and assistants coordinated and completed the disinterment of remains from Cuba and Puerto Rico. Of the remains recovered by Mr. Rhodes select group, only 13.63 percent could not be identified. Following this most amazing and previously unmatched identification rate, Mr. Rhodes and the Burial Corps were ordered to the Philippines for the Philippine insurrection (Steere 1953b, 1-2).

Already in the Theater was Chaplain Charles C. Pierce. Chaplain Pierce had been instructed by Major General E.S. Otis, commander of the Department of the Philippines, to establish and direct the U.S. Army Morgue and Office of Identification at Manila. The organizations led by Chaplain Pierce and Mr. Rhodes worked well given their respective tasks, although each reported up different channels. Even with the two separate organizations conducting their own individual operations, in 1901 their combined work cut the unknown percentage to just nine percent. This continued a very positive trend in remains identification. Another result of these efforts was the recommendation for an aluminum identity disk to be added into the field kit to serve as another means to assist in the identification process (Steere 1953b, 2)

In 1912, the Quartermaster Department was reconstituted as a Corps during a brief but significant period of change within the U.S. Army. With this change in the U.S. Army, and more importantly, the Quartermaster Corps structure, came the requirement

for the Quartermaster Corps to assume many of the special service activities that were previously performed by either civilians or military details. Within this conglomeration of service activities was the authorization, by War Department General Orders No. 104, dated 7 August 1917, of the Quartermaster Graves Registration Service Company. Effective changes in mortuary affairs procedures during this time, such as that of reducing the time from original burial to grave registration, further reduced the World War I percentage of unknowns to 2.2 percent (Steere 1953b, 3).

This low rate of unknowns continued a positive trend in the implementation of graves registration units on the modern battlefield. None other than General Pershing, Commander of the American Expeditionary Force, had requested the set-up of a graves registration service. Eventually, nineteen graves registration companies would be sent to France. At this juncture in American history, a good portion of the public sentiment still believed in the burial of service members in the area that they had died. Lieutenant Quentin Roosevelt, son of Teddy Roosevelt, would be one of these soldiers (Anders 1988, 23).

World War II would bring about other changes. According to QMC Historical Studies Number 21 (April 1951), *The Graves Registration Service in World War II*, the U.S. military was ill prepared to conduct graves registration or mortuary affairs on the grand scale that was to happen. The U.S. military had used World War I for a basis from which to plan and contemplate future wartime scenarios. However, this decision would prove to be inadequate for such planning. World War II combat operations in the Europe, and the European Theater of Operations (ETO) in general, did have some similarities as its earlier World War I counterparts. Also, some estimations and planning did prove

fruitful when looking back on this particular theater. However, the fast paced and massive World War II combat operations occurring in the Mediterranean and North Africa, or the Mediterranean/North Africa Theater of Operations (M/NATO), and more importantly, the Pacific or Pacific Theater of Operations (PTO), were much different from the methodical, more linear force arrangements, and vast countryside battles which exemplified the ETO of World War I and World War II (Steere 1951, 15-60).

The difficulties faced in the planning and support of graves registration operations were relatively simple during World War II in the ETO. These difficulties could be overcome because of the time spent in preparation for and the ability to study the other theaters and their actions for the past three years. However, action in the PTO required a much swifter reaction after the Japanese bombing of Pearl Harbor and the subsequent declaration of war by U.S. President Franklin D. Roosevelt. Thus they had much less time in their long term preparation for and execution of graves registration operations. World War II did, however, greatly assist in the continued evolution of doctrine and force structure during this same time.

Regardless of the theater of operations, U.S. participation in World War II resulted in the deaths of over 400,000 U.S. service members and civilians (U.S. DoD 2004). Because of this, in 1946 the U.S. Army Quartermaster Corps produced a pamphlet to assist the next of kin of these deceased in understanding what processes were to occur in the return and final burial of their loved ones. This pamphlet gave an almost one hundred percent step by step account of the actions that the U.S. government would undertake, and what was required by the families to assist in this process. Efforts such as this sought to complement the overall search, recovery, identification and temporary



burial in cemeteries and isolated graves that had been undertaken thus far. This type of U.S. government care for the families continued to build the culture that exists in the U.S. today regarding contemporary mortuary affairs. A more in-depth look into U.S. culture regarding mortuary affairs will be discussed later in this chapter (Quartermaster Museum 2000).

Following the end of World War II, drastic troop reductions occurred in all of the military services. The U.S. Army was no exception. As the unexpected emergency in Korea unfolded in 1950, only one graves registration platoon remained ready for immediate deployment and their actual level of training was less than desired. This platoon, stationed in Yokohama, Japan, and one graves registration company stationed at Ft. Bragg, N.C. were all that remained on active duty status within the U.S. Army. As the initial fighting broke out the platoon was quickly divided and with the future deployment of additional graves registration assets, eleven temporary cemeteries were eventually established.

A renewed offensive by the communist forces in 1950 made this temporary cemetery system unpractical as the front lines of the fighting were much too fluid to ensure that all of the cemeteries remained within the U.S. held areas. This aspect caused a rethinking of the established temporary cemetery system to something more aligned with the immediate return of remains. New battle losses would now be sent to Japan for processing and shipment to the continental U.S. (CONUS). At the same time, a historical precedent was being set as almost 5,000 previously buried sets of remains were exhumed and sent to Japan for processing during active hostilities. The exhumation of remains

during active hostilities had not been attempted or conducted during previous wars and most certainly led to a significant change in standard policy (Anders 1988, 24).

In 1951, with over a year of fighting now conducted and forward battle lines more firmly established, a United Nations cemetery was opened in Tanggok and the Eighth Army Central Identification Laboratory was formed. The use of refrigerated rail cars, forward collection points and active search and recovery operations were now commonplace and would continue until the end of fighting. Factors such as these contributed to a ninety seven percent identification rate of recovered remains as well as lowering the number of days it was taking to return remains to CONUS to thirty days. As noted above, the actions taken in response to the renewed communist offensive in late 1950 and subsequent decision made to evacuate remains to Japan for identification would have lasting effects on graves registration not only during the Korean War and would greatly influence graves registration during the Vietnam War and beyond (Anders 1988, 25).

As stated in chapter one, the transportation of remains had always been one of the underlying reasons for a countries inability to effectively return remains to their homeland. As the use of refrigerated railcars altered this issue in Korea, the availability and use of better communications assets and helicopters inexorably continued this progression (Anders 1988, 24). Vietnam saw more and greater use of small unit tactics and now these same smaller units were the primary assets in the recovery of their fellow soldiers' remains. With the ability to request helicopter transportation of their dead, these units now facilitated the expedient recovery and eventual identification of remains as the lag time between death and subsequent recovery was virtually eliminated.

A second step in speeding up this process occurred with the establishment of two area identification laboratories in Tan Son Nhut, near Saigon, and at Da Nang. These two identification laboratories further reduced the recovery to identification time period. These fixed laboratories achieved this by applying greater use of scientific processes such as dental and fingerprint methods to further assist in the identification. According to the Arlington National Cemetery webpage, with the disinterment and subsequent identification of the one set of Vietnam era remains from the tomb of the Unknown Soldier in Arlington Cemetery, Virginia, all of the previously listed twenty-eight sets of recovered Vietnam War remains have now been identified (Military District of Washington 2004b).

Development of graves registration continued throughout the next fifty years with little in the way of significant overhauls to the tactics, techniques or procedures of the methodology applied. Tommy D. Bourlier expressed this best in a 1988 article:

Historically, Graves Registration (GRREG) is a field that has changed very little. Doctrine is much the same as during Vietnam, the Korean Conflict, and World War II. Little change has taken place because there has been little interest in graves registration during periods of peace. GRREG has been a box put on the shelf until needed; then taken down, dusted off, and expected to still work and fit whatever situation facing us. (Bourlier 1988, 2)

Yet, one of the more intensive and in-depth queries into graves registration was a July 1981 study conducted by the U.S. Army Concepts Analysis Agency on behalf of the Department of the Army, Office of the Deputy Chief of Staff for Logistics (ODCSLOG). In that study, it states the purpose of the study is to: “a. (U) Analyze the handling of deceased personnel and the policies which would serve to implement a program to care for the dead during major military operations. b. (U) Determine the alternatives available to the U.S. Army’ in meeting the requirement to care for deceased personnel during

major military operations” (DTIC 1981, i). The study evaluators conducted a thorough and exhaustive study of the then current force manning of graves registration (now mortuary affairs) units and the projected workload of the units in two likely war scenarios, that of the ETO and a contingency operation in the Persian Gulf.

One of the more intriguing questions posed by the study team was: “What organizations besides the ODCSLOG, HQDA are involved in planning and implementing policy on handling of remains? Do they operate in concert?” (DTIC 1981, 8-5). They found that there exists an “intricate network of relationships and shared responsibilities that shift during the transition from peacetime to hostilities. Army policy divides responsibilities for programs between TAG (The Adjutant General) and the DCSLOG” (DTIC 1981, 8-5). It appears that some, if not all of the responsible parties continue to play significant roles in their respective areas and have not changed drastically since this study was conducted. The study also notes within the final observations that Doctrine was not consolidated. This aspect of the study seems to have been rectified with the publishing of Joint Publication 4-06, which effectively solidified U.S. Army Regulations as that of the new Joint Regulations.

If the grandeur and scale of previous wars helped develop common graves registration procedures in conjunction with the theater in question and specifics of the operation into consideration, then the military of the 1990s ushered in an era of military “Jointness.” This was brought about by the service branches of the U.S. Military being directed and seeking to work with each other and to establish a common understanding of the terms and procedures of this “new” Joint force. A direct result of this effort is Joint

Publication 4-06, *Joint Tactics, Techniques, and procedures for Mortuary Affairs in Joint Operations*. This publication, dated 28 August 1996, defines its scope as:

This publication establishes joint doctrine and provides joint tactics, techniques, and procedures (JTTP) for mortuary affairs in joint operations to a joint force commander (JFC) and staff. It outlines procedures for the search, recovery, evacuation (to include tracking of remains), tentative identification, processing, and/or temporary interment of remains in theaters of operations. This JTTP addresses decontamination procedures for handling contaminated remains and provides for the handling of personal effects of deceased and missing personnel. (CJCS 1996, i)

This publication in essence solidified the then current U.S. Army procedures, as the U.S. Army had previously been designated as the Executive Agent for mortuary affairs operations, as that of the joint procedures. JP 4-06 goes on to divide the Joint Mortuary Affairs Program into three distinct programs:

Under the **current death program**, remains are shipped to a place designated by the person authorized to direct permanent disposition and are provided with professional mortuary services, supplies, and related services. The **graves registration program** provides for search, recovery, tentative identification, and evacuation or temporary burial of deceased personnel. The **concurrent return program** is the preferred method of handling during periods of conflict. It should be activated when the current death program capabilities are exceeded, yet conditions do not require temporary interment. (CJCS 1996, vii)

This JP is now the de facto publication governing mortuary affairs operations across the services.

#### Emerging Policies, Procedures, and Practices of Mortuary Affairs

In 1990, a Memorandum of Policy No. 16 was issued and published by the Chairman, Joint Chiefs of Staff, titled *Joint Mortuary Affairs Policy* to clarify new policies and procedures governing mortuary affairs. This policy, although not the first in the line of policy in reference to mortuary affairs, did further clarify changes between the 1990 and 1988 versions. Two key changes emerged. One, it better defined the peacetime

and wartime functions of the Central Joint Mortuary Affairs Office. Two, it established the roles and mission of the Armed Forces Medical Examiner when operating in a unified command area of responsibility. However, the greatest significance of this memorandum may be that it “clarifies Army responsibilities as the Executive Agent of the Chairman, Joint Chiefs of Staff, for the Joint Mortuary Affairs program” (CJCS 1990, i). This policy, by identifying the Chief of Staff of the Army (CSA) as the Executive Agent, lay out the requirements of the Executive Agent. It required the CSA to “develop and obtain CJCS approval on joint mortuary affairs wartime doctrine, procedures, and training materials for use by all Services” (CJCS 1990, 2). The CSA was also directed to establish a doctrine and training integration center to accomplish this task. This then formed the basic beginnings of joint mortuary affairs and its joint doctrinal training and procedures.

Department of Defense Directive Number 1300.22, dated 3 February 2000, titled *Mortuary Affairs Policy*, superseded the 1990- Joint Chiefs of Staff Memorandum No. 16 and assigned responsibility for mortuary affairs within the Department of Defense. This Department of Defense Directive takes the mortuary affairs program from the Chairman, Joint Chiefs of Staff level, up to the Department of Defense level. This Directive also complements Joint Publication (JP) 4-06 (U.S. DoD 2000a, 1).

The United States, having made significant in-roads to ensuring that the U.S. military services are operating from common doctrine, is not alone when planning for and discussing mortuary affairs and its related implications, both internally and abroad.

Quadripartite Standardization Agreement (QSTAG) number 655 Edition 2, *Handling of Deceased Personnel in an Area of Operations*, signed 5 September 1996, by Washington, DC, Standardization Officers from the militaries of the United States, the United

Kingdom, Canada and Australia sought to “standardize procedures for ABCA forces for handling of all deceased personnel in an area of operation” (QSTAG 1996, 1).

North Atlantic Treaty Organization (NATO) Military Agency for Standardization (MAS) Standardization Agreement (STANAG) 2070 TOP (Edition 4) – *Emergency War Burial Procedures*, promulgated 6 April 1999, aimed to “standardize the procedures to be used when the forces of one NATO nation perform emergency burials on land for the dead of another NATO nation, the enemy and non-combatants as necessary” (NATO 1999, 1). Standard Agreements such as these continue to bring mortuary affairs to the forefront when discussing military operations both at home and abroad, and especially so when these operations include the U.S. and its Coalition partners.

The U.S., while working amongst the services, NATO and future possible coalition partners to develop a clear understanding of mortuary affairs policies and procedures, continues to examine its own evolving mortuary affairs procedures in today’s contemporary operations environment. Chapter eight of U.S. Army Field Manual (FM) 10-63, as well as the aforementioned JP 4-06 speak to the issue of contaminated remains and the proper handling, planning and burial of these remains. This is an extremely sensitive issue and has received increased interest in U.S. military publications and in the media due to the expected use of nuclear, biological, and chemical (NBC) contaminants by Iraq during Operation Desert Storm as well as the emerging terrorist threat of the late 1990s and early 2000s. The most important of these issues is considered the proper method of decontaminating remains for return to the primary next of kin.

One particular in-depth examination regarding contaminated remains and the U.S. Army’s ability to support decontamination operations is a 2000 paper by Paul A. Bethke

titled *Mortuary Affairs: Are we prepared to meet the challenge?* In this paper, prepared for the U.S. Army War College class of 2000, Bethke articulates the Federal and State policies, directives, programs, and plans to improve their response capabilities, as well as the projected employment of the U.S. Army mortuary affairs units to support these operations. Bethke goes on to describe how the expected use of NBC contaminants by Iraq in Operations Desert Storm led to an increased effort by the U.S. government to address the issue of chemically contaminated remains. This in turn led to several key decisions to update and/or develop new policies, tactics, techniques and procedures regarding the handling and decontamination of remains (Bethke 2000, 2-21).

Larry L. Toler, in a 2002 article titled *Mortuary Affairs Transformation*, wrote that in order for the mortuary affairs field to fulfill its obligations within the full spectrum, global projection U.S. Army in transformation, significant changes will need to occur. These changes, he states, must go beyond the mere building and procurement of new systems, but must incorporate advanced technologies, organizations and concepts. These new systems need to improve the strategic and tactical transportability of remains while achieving a smaller logistics footprint on the battlefield. He further states that current mortuary affairs assets will not meet the future requirements of the military. Better situational awareness through the use of precision navigation or Global Positioning Systems (GPS) type systems coupled with map displays and digital photography/video will better ensure only the greatest reporting accuracy of remains locations. His final point centers around a greater degree of forensic training technologies, a mobile remains collection system, and improved developments in transfer case technology will “pull” the mortuary affairs transformation further along (Toler 2002, 40).



Amelia Stewart, under the auspices of the U.S. Army contractor working issues for the Director of Combat Development-Quartermaster (DCD-QM), submitted a proposal for the addition of a mortuary affairs automated tracking system to the Department of Defense Casualty Information Processing System (DCIPS-MAATS). This automated system would enhance the capabilities of all mortuary affairs units to more accurately track the collection and processing of remains. This system in essence, would bring the information and remains processing trails into the 21<sup>st</sup> century in terms of automated tracking. “The DCIPS-MAATS module will provide the in-transit visibility of remains and assist the casualty officer with the status of the remains prior to disposition” (U.S. DoD RAI-NC n.d.). As of November 2003, this addition to the DCIPS was not funded.

Some would say that by ensuring correct procedures and policies are in-place, being followed, and that future systems are being developed, is only half the problem. The honest, accurate and timely flow of information is the real key to bringing such a program together and the first step in easing the pain of the personnel involved in the complete mortuary affairs process, from the service members at war all the way through to the notification of the primary next of kin.

Much guidance is given out today by the military public affairs officers stationed the world over when broaching the subject of casualty and mortuary affairs. These guidance memoranda are intended to give informative, set guidelines to what is allowable when discussing casualty and mortuary affairs issues in military operations. They specifically address the timeliness in which the military intends to inform the media of casualties and deceased, among other categories of, personnel, given the military has

been able to notify the primary next of kin (PNOK) first. Examples can be found for each large military operation that occurs as well as selected smaller or mid-range military operations. These memoranda seek to belay the sensitivity with which the military attaches to the loss of military members and the proper notification of their PNOK before allowing this information to be made public knowledge. These memoranda often discuss the general rule of not allowing photographs of service members either wounded or killed in action, when identification could be made from the photograph alone (OASD-PA 2003).

Department of Defense Instruction Number 1300.18, *Military Personnel Casualty Matters, Policies, and Procedures*, dated 18 December 2000, “assign responsibilities and establish uniform personnel policies and procedures for notifying and assisting the next of kin (NOK) whenever casualties are sustained by active duty (AD) military personnel” (U.S. DoD 2000b, 1). This Instruction provides for a central source of data and “Establishes a Military Services Policy Board responsible for developing and recommending broad policy guidance, and for proposing goals for the Military Services to ensure uniform policy regarding the care of military members and their families and to ensure accurate reporting and accounting for the status of military members regarding mission accomplishment” (U.S. DoD 2000b, 1). In short, this policy ensured that the service branches of the military were consistent in their accounting for casualties and the notification procedures for the NOK.

The *Department of Defense Policy Regarding Update of DoD Personnel Accounting Statistics*, stated that “The Department of Defense is committed to achieving the fullest possible accounting for personnel missing as a result of hostile action while

serving the United States, and to informing family members and the American public in a timely manner of the results of the government's efforts" (U.S. DoD 2003, 1). A second and very closely related policy, the *Department of Defense Policy Regarding the Recovery and Identification of Remains of Missing Personnel*, also addresses the general methods by which individuals recovered, identified and the scientific lengths the government will use to accomplish this (U.S. DoD 2001a).

### The Culture: "No One Left Behind"

As previously discussed, the historical culture within the U.S., in regards to mortuary affairs, can be traced back to the initial establishment of the first military cemetery in Mexico City, Mexico, and the establishment of the stateside American Graves Registration Service. Further efforts by the U.S. government to educate the next of kin of deceased service members and civilians following World War II continued to address this cultural shift.

The U.S. culture in-turn has selected symbols as a representative "sign of the times," putting feelings into a visual representation. Historically, many symbols have been selected to represent military service to our nation during times of war, as well as the loss of a family member while serving in the U.S. military. One early World War I symbol that represented a member of a household in the military service of the U.S. was a blue star service banner. This blue star service banner would be placed in the windows of these homes. As the number of men and women killed in combat or died of wounds mounted, it became generally accepted that as a member of the household died, a gold star would be sewn completely over the blue star. Thus, these mothers of the fallen simply became known as gold star mothers.



Figure 1. Blue Star Service Banner

Source: The American Legion. Blue Star Service Banner. Webpage. Available from [http://www.legion.org/support/?section=sup\\_bluestar&content=support\\_bluestar](http://www.legion.org/support/?section=sup_bluestar&content=support_bluestar). Internet. Accessed 9 January 2004.

One of the earliest organizations that came to being as a result of the loss of a family member during combat service to the U.S. was the American Gold Star Mothers. This organization, incorporated in Washington, DC, in 1929, utilized the gold star as a symbol to represent a son of the household had died while fighting in World War I. This Gold Star symbolized not the mourning of the loss of the son or daughter, but the honor or glory for this person's supreme sacrifice for the U.S. This organization continues to exist today and has 150 chapters throughout the U.S. The organization has since opened its ranks to allow other mothers who have lost a son or daughter in World War II, the Korean War, the Vietnam War, Beirut, Grenada, Panama, the Persian Gulf, Somalia, Bosnia, Saudi Arabia, all Strategic Areas, or while in service to the U.S. to also enter. In 1936, the 74th Congress approved Public Resolution 123, which hereafter designated the last Sunday in September as "Gold Star Mother's Day" (American Gold Star Mothers. Webpage 2004).



Figure 2. Gold Star Symbol of the American Gold Star Mothers

*Source:* American Gold Star Mothers. 2004. Home. Webpage. Available from <http://www.goldstar-moms.com/index.htm>. Internet. Accessed 9 January 2004

A symbol with similar ties as that of the American Gold Star Mothers that came about from what some have called the “greatest generation,” that of the World War II generation is the Gold Star symbol of the Gold Star Wives of America, Inc.



Figure 3. Gold Star Symbol of the Gold Star Wives of America, Inc.

*Source:* Gold Star Wives of America, Inc., n.d. Info and Links. Webpage. Available from <http://www.goldstarwives.org/info.htm>. Internet. Accessed 1 January 2004

This symbol bonded those “who have been called upon in a very personal way to share in the “last full measure of devotion” to our country and mankind” (Gold Star Wives of America, Inc. n.d.). This group, originally incorporated in the State of New York on 15 December 1945 and granted a Federal Charter by Congress on 4 December 1980, serves as a reminder to all that even after the death of a service member, their legacy will live on. The purposes of this group are many; however, they like many others that assemble for similar purposes and for similar reasons, “honor the memory of those who made the supreme sacrifice in the service of our country” (Gold Star Wives of America, Inc. n.d.).

During the Vietnam conflict, a symbol of the culture that developed and has continued to play a role in the evolution of mortuary affairs is the POW/MIA flag.



Figure 4. POW/MIA Flag

*Source:* The National League of POW/MIA Families. 2003. Flag History. Webpage. Available from <http://www.pow-miafamilies.org/flaghistory.html>. Internet. Accessed 22 November 2003.

Mrs. Michael Hoff and the Annin and Company advertising agency of which, Mr. Norman Rivkees, a man very sympathetic to the POW/MIA issue, and then current Vice President of the company, played a role in its development designed the flag. On 10 August 1990, U.S. Public Law 101-355, designated this flag “as the symbol of our Nation’s concern and commitment to resolving as fully as possible the fates of Americans still prisoner, missing and unaccounted for in Southeast Asia, thus ending the uncertainty for their families and the Nation” (The National League of POW/MIA Families 2003).

As a representative of a more recent concern by the public to ensure accountability of the missing, the National League of POW/MIA Families, continue this cultural emphasis today. Having initially been founded in response to a lack of perceived action by the U.S. government to fully account for the Americans that were held prisoner or having a fate unknown, groups such as these embraced and became attached to the political issue that the U.S. culture has associated with this unfortunate result of service to the government. Consequently, this group in particular continues to pursue their original mission as well as to lobby to assist other groups facing similar circumstances.

Other organizations that have significant importance in U.S. politics regarding military issues are the Veterans of Foreign Wars of the United States and The American Legion. These two large organizations, with several million members, both represent those persons who have served or serve today in the U.S. military. These two organizations and others like them, continue to influence the political scenery on military matters through the use of legislative watch groups. These watch groups often seek to ensure that benefits promised to military members, past, present and future, are followed through until completion or reception, whatever the case.

Today, the United States is a society that has expectations of the government and its responsibilities to “we the people.” President George W. Bush, in addressing the “No Child Left Behind Act” educational reform bill, affirmed a poignant belief that the U.S. government will support its people, regardless of age, race, etc. (Reed 2003). This simple phrase--“No Child Left Behind”--has become representative of many of the expectations of the U.S. society and its form of government.

This type of concern and care for those less fortunate or in need can be found in many of our civilian and military icons as well as rallying cries. Emma Lazarus, upon seeing the Statue of Liberty, wrote in her poem titled *The New Colossus*:

Give me your tired, your poor,  
Your huddled masses yearning to breathe free,  
The wretched refuse of your teeming shore,  
Send these, the homeless, tempest-tost to me,  
I lift my lamp beside the golden door! (Lazarus n.d.)

The poem is now inscribed on a plaque that has been mounted to the base of the Statue of Liberty.

Even the newest Chief of Staff of the Army, General Peter Schoomaker, echoed this cultural mantra when he outlined the four tenets of the Army’s new warrior ethos during a tour of Ft. Jackson, South Carolina, “the mission first; second, we don’t quit; third, we will never accept defeat; and fourth, we will never leave a fallen comrade” (Crumbo 2003). The warrior ethos program had been formally authorized by the previous Army Chief of Staff, General Eric Shinseki, and is fully supported by General Schoomaker. It is obvious that this culture as it were, is ingrained in both the civilian and military sectors of society.



Today mortuary affairs personnel are serving in Afghanistan in Operation Enduring Freedom and in Iraq with Operation Iraqi Freedom, Bosnia, and several other locations as well (U.S. Army Mortuary Affairs Center n.d.). They will continue to perform their duties in these war zones when required.

### Null Hypotheses

From the review of literature, the following null hypotheses are formulated:

Null Hypothesis 1 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by gender.

Null Hypothesis 2 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by marital status.

Null Hypothesis 3 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by a with/without child status.

Null Hypothesis 4 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by component of service.

Null Hypothesis 5 - There will be no differences between attitudes in regards to Mortuary Affairs when compared by major combat operations (MCO) experience.

Null Hypothesis 6 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by personal knowledge of someone who died while serving in the military.

Null Hypothesis 7 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by service with Mortuary Affairs personnel.

Null Hypothesis 8 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by the 32-to-35-year-old, 36-to-39-year-old, 40-to-43-year-old, and 44-to-47-year-old age groups.

Null Hypothesis 9 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by rank.

Null Hypothesis 10 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by combat arms, combat support, combat service support, “other,” and sister service branch groups.

### Research Questions

From the review of the literature, the following research questions have emerged:

Research Question 1 – Given the contemporary operating environment (COE) that the U.S. military operates in now, the “no one left behind” culture, and the effects of mass media and global communications, what future changes will be demanded within mortuary affairs?

Research Question 2 – Does the multi-service mortuary affairs training being conducted at Fort Lee, Virginia, enhance the “joint mortuary affairs” concept and doctrine, given the U.S. Army’s role as Executive Agent for mortuary affairs?

### Summary

This literature review examined the foundations of mortuary affairs in the United States Army and United States military, the development of mortuary affairs tactics, techniques, and procedures, the basis for U.S. Army and now joint mortuary affairs policy, and ended with the no one left behind culture and the effects of this culture on

emerging military policy. Finally, ten null hypotheses were formulated and two research questions emerged from this literature review.

## CHAPTER 3

### RESEARCH METHODOLOGY

Chapter 2 provided a firm context of mortuary affairs based on a literature review. The purpose of this chapter is to provide a description of the survey subjects, review the research design and application, provide background concerning the use of a pilot survey, review the survey administration procedures chosen, provide a brief description of the instruments and measurements, provide a rationale for the data analysis procedures, and conclude with the reliability and internal/external validity of the instruments used in the measurement.

#### Subjects

Selected students and faculty of the U.S. Army Command and General Staff College's (CGSC) Class of 2003-2004 participated in the study gauging the current opinion of contemporary U.S. Army mortuary affairs community procedures and policies. The students and faculty at CGSC have representatives from the U.S. Army, U.S. Air Force, U.S. Navy, U.S. Marine Corps, as well as international officers from various countries. The selected students represent a general cross section of all U.S. Army officer military specialties and assignments, as well as those specialties from the other three U.S. military forces (hereafter know as the Sister Services), and that of the participating international community.

The final survey group of students and faculty was chosen on a convenience basis of their assignment to the U.S. Army Command and General Staff College student division D. Division D is one of four student divisions in the CGSC Class of 2003-2004.

This division is comprised of 285 students, all officers, and sixteen instructors, both officer and civilian. Division D itself is further broken down into sixteen “staff groups” with approximately seventeen to nineteen students in each staff group with one primary military or civilian instructor. The general makeup of each student staff group varies, but in general terms includes fourteen to fifteen U.S. Army majors with approximately twelve to fourteen years time in service, two U.S. sister service military majors with approximately twelve to fourteen years time in service, and one to two foreign military rank equivalent captain or major international officers, with between ten to sixteen years time in service. Division D represents one quarter of the total CGSC student population for this academic year. Of the 301 total students and faculty selected for the survey, 113 surveys were ultimately completed.

### Procedures and Research Design

To fulfill the research needs demanded for the issue of mortuary affairs, a primarily quantitative type study was selected that utilized the survey research methodology. A thorough review of literature, as described in chapter 2, served as the basis for the research. From this review of literature, three mortuary affairs topics emerged. The three topics are: History of Mortuary Affairs; Emerging Policies, Procedures, and Practices; and the “No one left behind” Culture. The development of the survey continued with a round table discussion by the MMAS committee. This survey development led to a delineation of the five areas of research that would need to be studied. These five areas of research and three mortuary affairs topics would serve as the basis for the survey.

The survey was divided into three distinct parts. The three parts of the survey were designated: “General Demographics,” “Opinion Survey,” and “Open-ended Questions.” Several draft survey versions were staffed among the MMAS committee, and with the assistance of the Command and General Staff School’s (CGSS) Development Assessment Division (DAD), all survey questions were analyzed for relevancy to the three emergent topics or five areas of research. Throughout this survey development process the survey instrument as a whole was closely examined for clarity and validity, more of which will be discussed later in this chapter. The Research Methodology Diagram represented in figure 5 visually depicts the entire research process.

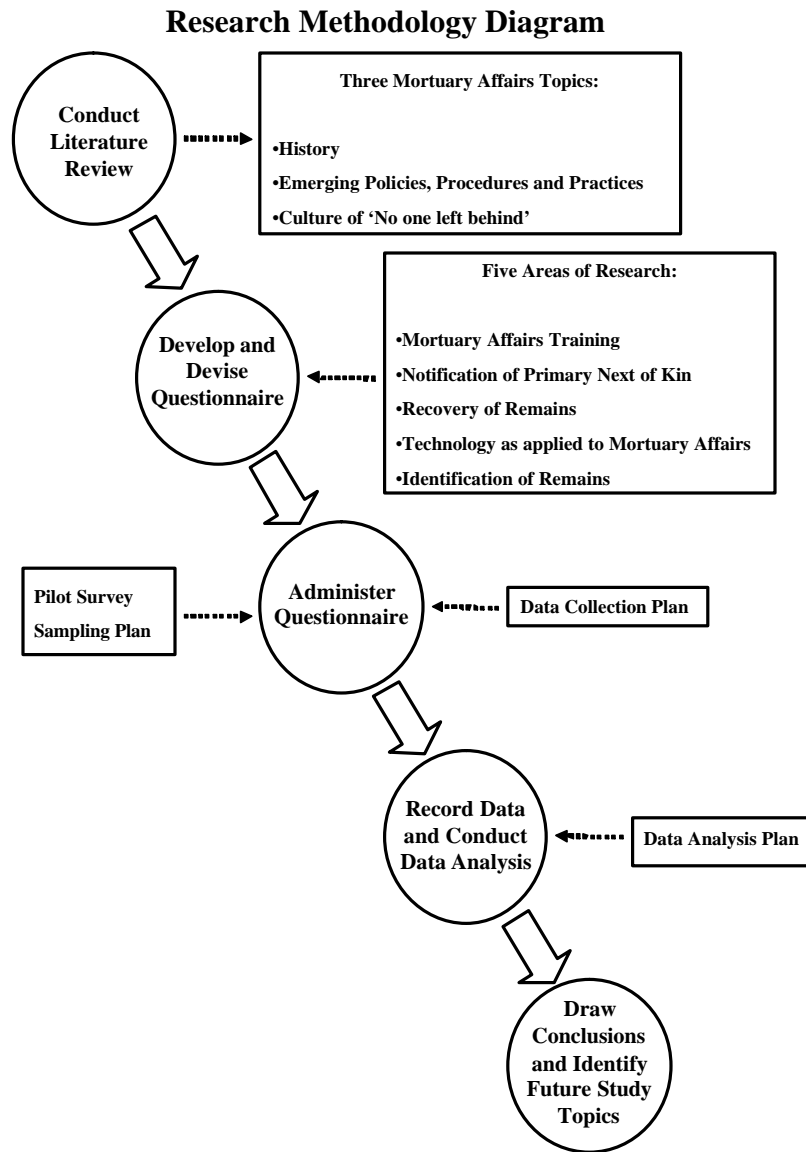


Figure 5. Research Methodology Diagram

### Pilot Survey

After approval of the general design and question-to-topic relationship of the survey by the committee and the CGSS DAD, the survey was administered to a pilot staff group. The pilot staff group selected came from CGSC division B, so as not to influence a member of division D. The pilot survey administration occurred in the eighth month of

the CGSC school year, during what is known as Advanced Operations and Warfighting Course. All CGSC students had received a combat service support (CSS) block of instruction by this phase of the course. This CSS block of instruction described the application of mortuary affairs doctrine, as well as the placement of mortuary affairs units and collection points on the linear battlefield.

This pilot survey was conducted for several purposes. The main purpose of the pilot survey was to test for clarity of the questions and assurance that the questions were understood as intended. The second purpose of the pilot survey was to determine if the elicited responses were commensurate with the mortuary affairs topic and area(s) of research that each question was geared towards. The final purpose of the pilot study was to calculate the amount of time required to complete the questionnaire. Immediate feedback from the pilot sample group yielded two issues of clarity for two separate questions. These two questions, number ten from the ten opinion survey questions, and number three from the open-ended questions, were subsequently corrected to reflect the pilot study group's recommended changes. Through the effective use of a pilot study, clarity of the survey instrument was attained. Figure 6 displays the final version of the research survey questionnaire.

### Survey Administration

Through the effective use of a pilot survey, and having ensured that the instrument was viable, it was deemed ready for administration to CGSC division D, and the sixteen staff groups that comprise the division. The survey was given to the respective staff group senior instructor for dissemination. Following the administration of the survey, the surveys would either be turned in by the individual respondent, or in several



cases, by the small group class Adjutant (Administrative officer). The staff group senior instructors were directed to find a suitable morning timeframe to hand out and collect the surveys. Upon completion of the survey by the entire staff group, one individual was selected to deliver the surveys to the CGSC Development and Assessment Division (DAD) office.

### Instruments and Measurements

The survey instrument or questionnaire as shown in figure 6 described previously, consisted of three parts. Part I contained primarily demographic information (e.g., gender, age, marital status, number of children, current rank, U.S. Army branch or sister service military, component of service, etc.).

Part II of the questionnaire measured the students opinion levels based on the five areas of research, which directly related to the three mortuary affairs topics. The five areas of research were categorized as: mortuary affairs training, notification of the primary next of kin, recovery of the remains, technology as applied to mortuary affairs, and identification of the remains. Several of the questions crossed over more than one of the five areas of research. A five-point Likert-type scale was utilized for the students to respond “Strongly Agree,” “Agree,” “Neither Agree or Disagree,” “Disagree,” and “Strongly Disagree.” One alteration to this original Likert scale response format was required for Question number ten of the ten Opinion Survey questions. This question was designed to gauge an expected time period for notification of the primary next of kin of a deceased service member. This five point Likert scale requested the students to respond “Less than 12 hours,” “from 12 to 24 hours,” “from 24 to 36 hours,” “from 36 to 48

hours,” and “from 48 to 96 hours.” The findings and conclusions to these questions, as well as the five areas of research are examined in greater depth in chapters 4 and 5.

The last part of the survey, Part III, also measured the students opinion levels based on the same five areas of research. All five areas of research are represented in the three open-ended response questions. A fourth question, generic in nature, elicits the surveyed individual to give any additional feelings or thoughts on the subject of mortuary affairs. All reliabilities for the open-ended measures are presented in chapter 4.

**Officer Opinion Survey regarding  
Contemporary U.S. Army and Joint Mortuary Affairs**

The purpose of this questionnaire is to gain an understanding of the cultural demands that exist within the U.S. military regarding the field of Mortuary Affairs. The following questionnaire was also developed to assist the author, Major James R. Becker, in the completion of a Masters of Military Arts and Sciences student thesis. Participation in this questionnaire is voluntary and all personal information gathered within will be kept anonymous. The author is a student of the U.S. Army Command and General Staff College and any questions regarding this questionnaire should be addressed to: james.becker1@us.army.mil.

Please follow the instructions as outlined in the following sections of the questionnaire. Completion of the questionnaire should take less than twenty minutes.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency.

Figure 6. Questionnaire

## CGSC Officer Opinion Survey - Contemporary Mortuary Affairs

### General Demographics

Please mark each question with one X as it applies. An example is shown here: (X). For all others, please write legibly.

Gender            ☐ Male            ☐ Female

Age (yrs)        ☐ 28-31        ☐ 32-35        ☐ 36-39        ☐ 40-43        ☐ 44-47        ☐ Other \_\_\_\_\_

Married         ☐ Yes            ☐ No

Children        ☐ Yes            ☐ No

Rank            ☐ 01-02        ☐ 03            ☐ 04            ☐ 05-06        ☐ Other \_\_\_\_\_

Branch         \_\_\_\_\_(two letter designation, e.g., Signal Corps = SC) for U.S. Army and abbreviate for USN, USMC and USAF

Component     ☐ US Army       ☐ USAR Res     ☐ USAR NG     ☐ Other \_\_\_\_\_ (International students fill in here)

I have served in Major Combat Operation(s)        ☐ No            ☐ Yes (If yes, which one(s))

---

I personally know someone who died while serving in the military.        ☐ Yes            ☐ No

I have served with Mortuary Affairs personnel in my military career.        ☐ Yes            ☐ No

### Opinion Survey

Below are ten statements regarding issues, procedures, policies, or practices of Mortuary Affairs operations. Circle the designation that best describes your attitude.

(SA = Strongly Agree; A = Agree; N = Neither Agree nor Disagree; D = Disagree; SD = Strongly Disagree).

1. I have an understanding of what Mortuary Affairs processes occur in the event of a service members death.	SA	A	N	D	SD
2. From my experience, Mortuary Affairs personnel perform their duties and mission in a professional manner.	SA	A	N	D	SD
3. The last unit that I was assigned to received a sufficient level of Mortuary Affairs training.	SA	A	N	D	SD
4. Commanders at all levels must understand the appropriate reporting procedures for Mortuary Affairs related issues.	SA	A	N	D	SD
5. Unless NBC contamination occurs, I would not accept the temporary or permanent interment (burial) of U.S. service members on foreign soil.	SA	A	N	D	SD
6. Regardless of the additional logistics issues, joint doctrine should require all U.S. military services to handle remains the same, i.e U.S. Navy shipboard deaths, etc...	SA	A	N	D	SD
7. The military should include emerging systems technologies that would assist in the recovery and identification of remains regardless of cost, weight or other factors.	SA	A	N	D	SD
8. Knowing that the military trains and equips personnel in the search, recovery and identification of remains improves my morale.	SA	A	N	D	SD
9. Unit level mortuary affairs training reinforces service members belief that they will be cared for reverently in death.	SA	A	N	D	SD
10. If I were killed and positively identified, my primary next of kin should be notified within (X) number of hours? <b>Circle: 12 hours or less, 12-24 hours, 24-36 hours, 36-48 hours, 48-96 hrs.</b>	<12	12-24	24-36	36-48	48-96

Figure 6 continued. Questionnaire Page 2.

Please respond to the following as completely as possible. Use the back of survey if needed.

- This survey should be dropped off at the CGSC Development and Assessment Division (DAD), room 132, Bell Hall.

Figure 6 continued. Questionnaire Page 3.

### Data Analysis

The data analysis for this study was determined through the conduct of a t-test or simple one-way Analysis of Variance (ANOVA). These tests examined significant differences between attitude scales from the survey based on the demographics of the surveyed population. A Chronbach's Alpha was performed on the data to establish internal reliability. This second portion of the analysis included a descriptive analysis (e.g., frequencies, means, standard deviations, standard errors) used to assess directional levels of mortuary affairs training, notification of the primary next of kin, technology as applied to mortuary affairs, recovery of remains, and identification of remains. The computer program utilized for this was the SPSS statistical program. In the final portion of the analysis and conclusions, the responses to the open-ended questions are explored for possible emergent themes as well as areas and questions for further and future study.

### Internal Validity

Internal validity is defined by a Cornell University webpage as: "the approximate truth about inferences regarding cause-effect or causal relationships" (Cornell University 2004). Assuring internal validity in this thesis as well as in the survey instrument is essential to proving that other "external" conditions are ruled out in the research, questionnaire development and administration, data analysis of the survey, as well as the thesis in total. Research indicated a difference of opinion in the number of sources of threat to internal validity. However, for the sake of simplicity, four relevant sources of threat to internal validity and one relevant source of threat to external validity will be discussed in this chapter.

### Threat to Internal Validity via Subject Characteristics

Threat to internal validity via subject characteristics for this survey research is the fact that only resident CGSC selected officers, as well as the sixteen civilian or military small group instructors were requested to participate in the survey. The convenience sample does not include any warrant officers or enlisted members of the U.S. Army. This is significant as, according to the 29<sup>th</sup> annual Department of Defense (DoD) report on social representation in the U.S. Military Service's, including the Coast Guard, enlisted personnel alone made up 406,200 of the 472,500 Army active component strength (or 86 percent) for 2002 (U.S. DoD 2002, D-15 and D-25). The convenience sample also does not include those officers with relatively little time in service, defined as less than six years time in service. However, this convenience sample does represent a broad sampling of U.S. Army personnel based on the general demographics of those surveyed. A broad sampling is defined herein for the purposes of internal validity as representative of personnel within the military who have participated in many of the U.S. military's conflicts, wars or major military operations within the past ten to fifteen years. This broad sample also must be representative of the U.S. Army in general demographic terms of married versus single, male versus female, etc., as well as cover the combat, combat support and combat service support branches of the U.S. Army. This sample population meets all of those characteristics of a broad sampling according to the aforementioned DoD report and the statistical break down of the Army.

### Threat to Internal Validity via Location

Threat to internal validity via location may coincide with the subject threat discussed previously in that this sample group is a "captured" audience. In this respect

the sample group may over-state the significance of a question due to the ample time allotted to take the questionnaire and the relative comfort existing in the “schoolhouse” environment. Simply put, the importance of the survey may be overstated in this sample group versus the entire U.S. Army population given their location and its relative factors.

#### Threat to Internal Validity via Instrumentation

Threat to internal validity via instrumentation was discussed earlier in this chapter. However, the survey instrument in question was developed primarily from the review of literature and input from members of the MMAS committee and CGSS DAD. These MMAS committee members and CGSS DAD personnel all brought varying degrees of knowledge of mortuary affairs operations, technical writing, and statistical analysis expertise to the development of the survey instrument. This peer reviewed development constituted face validity of the instrument. Finally, the use of a pilot survey to ensure clarity of the instrument and the questions therein also provides a level of validity of the instrument. Feedback that was solicited following the piloting of the survey also helps to establish an element of instrument reliability.

#### Threat to Internal Validity via Data Collector Bias

Threat to internal validity via data collector bias is somewhat resolved in the preceding paragraph in that any possible “leading” questions within the instrument can be factored out as the instrument is considered highly valid. Threat to internal validity via testing can similarly be discounted as the survey was only administered once and there was no advance warning to the sample group in question that they would be surveyed on the topic of mortuary affairs.



### External Validity

One unanticipated threat to external validity was that of history threat. Less than one month prior to the survey instrument being administered, a CGSC guest speaker broached the subject of his wishes for the recovery of his remains in a combat zone if he were to have been killed in action. However, although he gave his opinion of his particular wishes had he been killed, this thought may have only served to make the sample population more aware of the issue of remains recovery in a hostile environment. This precursor issue may have caused them to ponder the issue of remains recovery but only in the sense of what would their wishes have been had they been in this same speaker's position.

### Summary

In summary, this chapter provided a description of the survey subjects, reviewed the research design and application, provided background concerning the use of a pilot survey, reviewed the survey administration procedures chosen, provide a brief description of the instruments and measurements, provided a rationale for the data analysis procedures, and concluded with the reliability and internal/external validity of the instruments used in the measurement.

## CHAPTER 4

### RESULTS

The purpose of this chapter is to present the results of the data analysis described in chapter 3. These results are presented in four sections. The first section presents the internal reliabilities of the measurements in the survey. The second section presents the descriptive statistics and the frequency results for the category variables of the survey. The third section of this chapter presents the inferential testing of the hypotheses regarding differences in the control variables. The final section of this chapter is the qualitative examination of the open-ended responses regarding the future of mortuary affairs within the military services.

#### Section One - Internal Reliabilities of the Survey Measurements

A Chronbach's Alpha analysis of the ten attitudinal items regarding mortuary affairs was conducted to determine internal reliabilities of the survey items. The analysis revealed that the ten items had an internal reliability coefficient of .622 percent.

#### Section Two - Descriptive Statistics and Frequency Results

In this section, the means and standard deviation for each of the ten items measuring attitudes were computed for the survey population. Also, the frequency counts for the category variables were also computed. Bar graphs for each of the frequency counts were added to give a more visually understandable display.

### Means of Attitudinal Items on Mortuary Affairs

As shown in table 1, the means and standard deviations for each of the ten items measuring attitudes regarding the mortuary affairs process were computed and the results are presented.

Table 1. Descriptive Statistics			
	N	Mean	Std Deviation
Q1 Understanding of MA	113	2.46	.955
Q2 MA level of professionalism	113	2.22	.729
Q3 MA Training in my unit	113	3.61	.850
Q4 Commander's MA understanding	113	1.82	.735
Q5 Interment of US personnel on non-US soil	113	2.61	1.168
Q6 Joint MA doctrine and handling	112	2.85	1.100
Q7 Include Technology in MA	111	2.29	.967
Q8 MA Training and Morale	112	2.21	.810
Q9 MA Training and SM beliefs	112	2.34	.800
Q10 Notification Time for PNOK	112	2.48	1.155
Valid N (listwise)	111		

Each item was scored on a Likert scale of 1-5 (1 Strongly Agree through 5 Strongly Disagree). As indicated in question 1--I have an understanding of what mortuary Affairs processes occur in the event of a service member's death--the mean score of all respondents in the survey was 2.46 (Standard Deviation (sd) .955). In question 2--From my experience, Mortuary Affairs personnel perform their duties and mission in a professional manner--the mean score of all respondents in the survey was 2.22 (sd .729). Responses for survey question 3--The last unit that I was assigned to received a sufficient level of Mortuary Affairs training--showed a mean score of all respondents in the survey of 3.61 (sd .850). As indicated for question 4--Commanders at all levels must understand

the appropriate reporting procedures for Mortuary Affairs related issues--the mean score of all respondents in the survey was 1.82 (sd .735). As indicated for question 5--Unless NBC contamination occurs, I would not accept the temporary or permanent interment (burial) of U.S. service members on foreign soil--the mean score of all respondents in the survey was 2.61 (sd 1.168). In question 6--Regardless of the additional logistics issues, joint doctrine should require all U.S. military services to handle remains the same, i.e., U.S. Navy shipboard deaths, etc.--the mean score of all respondents in the survey was 2.85 (sd 1.100). Responses in question 7--the military should include emerging systems technologies that would assist in the recovery and identification of remains regardless of cost, weight or other factor--showed the mean score of all respondents in the survey was 2.29 (sd .967). Question 8--Knowing that the military trains and equips personnel in the search, recovery and identification of remains improves my moral--revealed a mean score of all respondents in the survey was 2.21 (sd .810). As indicated for question 9--Unit level mortuary affairs training reinforces service members belief that they will be cared for reverently in death--the mean score of all respondents in the survey was 2.34 (sd .800). As indicated for question 10--If I were killed and positively identified, my primary next of kin should be notified within (x) number of hours--the mean score of all respondents in the survey was 2.48 (sd 1.15).

#### Frequency Counts

In the second portion of the descriptive analysis the Frequency Counts for the category variables were computed as shown and are presented below.

As shown in table 2 and figure 7, 8 percent (N=9) of those surveyed were females, 92 percent (N= 104) of those surveyed were males.

Table 2. Gender Table					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	F	9	8.0	8.0	8.0
	M	104	92.0	92.0	100.0
	Total	113	100.0	100.0	

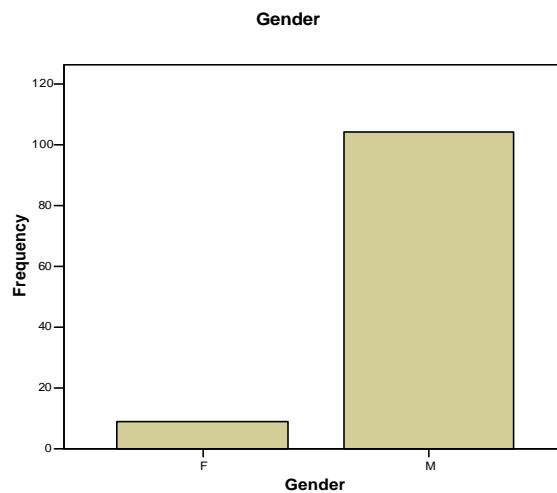


Figure 7. Gender Bar Chart

Table 3 and figure 8 reveals, 38.1 percent (N=43) of those surveyed were between the ages of 32 and 35, 42.5 percent (N=48) of those surveyed were between the ages of 36 and 39, 15.0 percent (N=17) of those surveyed were between the ages of 40 and 43, 3.5 percent (N=4) of those surveyed were between the ages of 44 and 47, and .9 percent (N=1) were 48 years or older.

Table 3. Age Table					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	32-35	43	38.1	38.1	38.1
	36-39	48	42.5	42.5	80.5
	40-43	17	15.0	15.0	95.6
	44-47	4	3.5	3.5	99.1
	48>	1	.9	.9	100.0
	Total	113	100.0	100.0	

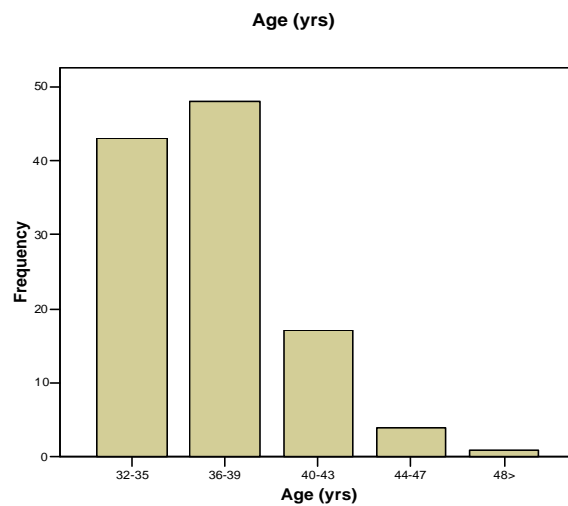


Figure 8. Age Bar Chart

In table 4 and figure 9, .9 percent (N=1) of those surveyed were invalid for determining marriage status, 11.5 percent (N=13) of those surveyed indicated they were not married, and 87.6 percent (N=99) of those surveyed indicated they were married.

Table 4. Marital Status Table					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Invalid	1	.9	.9	.9
	N	13	11.5	11.5	12.4
	Y	99	87.6	87.6	100.0
	Total	113	100.0	100.0	

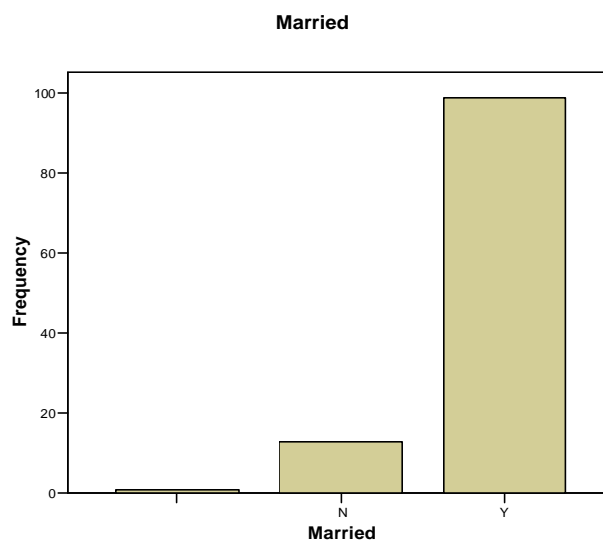


Figure 9. Marital Status Bar Chart

As shown in table 5 and figure 10, 15 percent (N=17) of those surveyed indicated they did not have children, and 85 percent (N=96) of those surveyed indicated they did have children.

Table 5. Child Status Table					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	17	15.0	15.0	15.0
	Y	96	85.0	85.0	100.0
	Total	113	100.0	100.0	

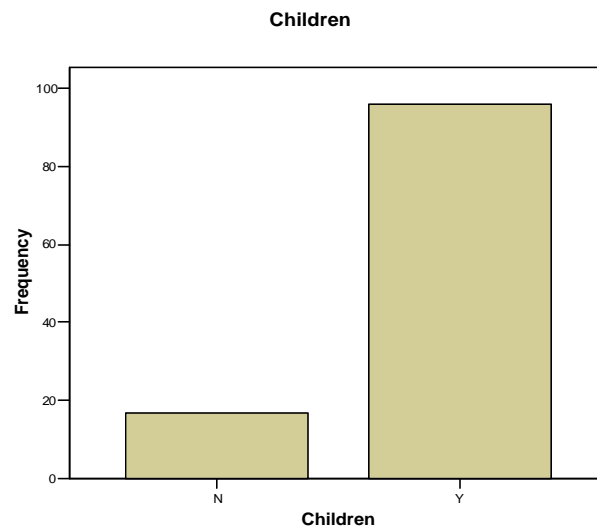


Figure 10. Child Status Bar Chart

In table 6 and figure 11, 3.5 percent (N=4) of those surveyed indicated that they were an officer in the pay grade of 0-3, 94.7 percent (N=107) of those surveyed indicated that they were an officer in the pay grade of 0-4, .9 percent (N=1) of those surveyed indicated that they were an officer in the pay grade of either 0-5 or 0-6, .9 percent (N=1) of those surveyed indicated that they were a civilian employee in the pay grade of General Services 13 or GS-13 for short.



Table 6. Branch Table					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	4	3.5	3.5	3.5
	4	107	94.7	94.7	98.2
	5-6	1	.9	.9	99.1
	GS-13	1	.9	.9	100.0
	Total	113	100.0	100.0	

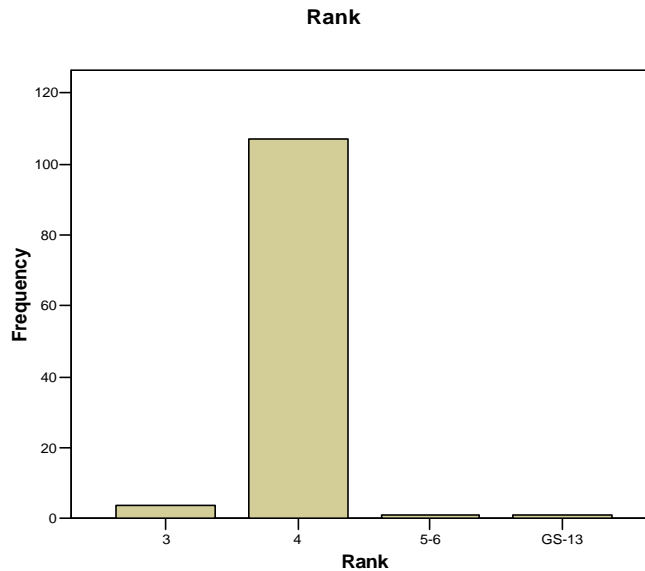


Figure 11. Rank/Pay grade Bar Chart

As shown in table 7 and figure 12, 1.8 percent (N=2) of those surveyed were invalid for determining branch affiliation. As determined from the figures shown in table 7 and figure 12, 38.0 percent (N=43) of those surveyed indicated that they serve in a combat arms branch, 15.1 percent (N=17) of those surveyed indicated that they serve in a combat support branch, 25.6 percent (N=29) of those surveyed indicated that they serve

in a combat service support branch, 3.6 percent (N=4) of those surveyed indicated that they serve in an “other” branch or specialty within the U.S. Army or foreign military, and 15.9 percent (N=18) of those surveyed indicated that they serve in another U.S. military service other than the U.S. Army.

Table 7. Branch Table					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Invalid	2	1.8	1.8	1.8
	AC	1	.9	.9	2.7
	AG	4	3.5	3.5	6.2
	AR	7	6.2	6.2	12.4
	AV	8	7.1	7.1	19.5
	CA	1	.9	.9	20.4
	CH	2	1.8	1.8	22.1
	CM	2	1.8	1.8	23.9
	DoD	1	.9	.9	24.8
	EN	6	5.3	5.3	30.1
	FA-39	1	.9	.9	31.0
	FA - 59	1	.9	.9	31.9
	FA	11	9.7	9.7	41.6
	FI	2	1.8	1.8	43.4
	IN	10	8.8	8.8	52.2
	LOG	1	.9	.9	53.1
	MI	8	7.1	7.1	60.2
	MP	1	.9	.9	61.1
	MS	3	2.7	2.7	63.7
	OD	6	5.3	5.3	69.0
	QM	4	3.5	3.5	72.6
	SC	5	4.4	4.4	77.0
	SF	1	.9	.9	77.9
	SP	1	.9	.9	78.8
	TC	7	6.2	6.2	85.0
	USAF	9	8.0	8.0	92.9
	USMC	1	.9	.9	93.8
	USN	7	6.2	6.2	100.0
	Total	113	100.0	100.0	

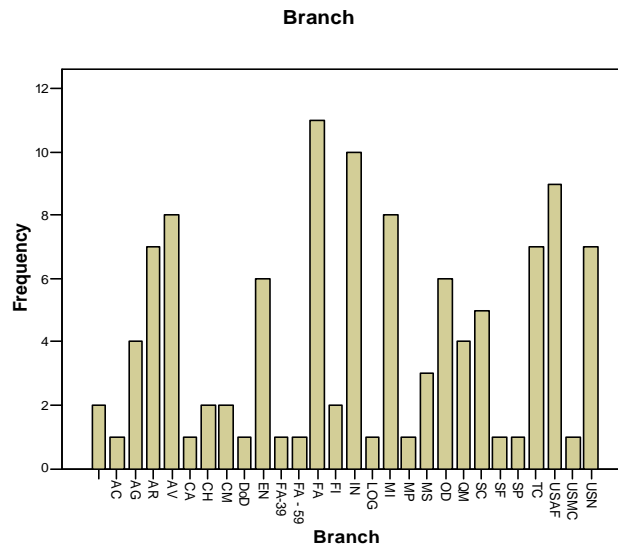


Figure 12. Branch Bar Chart

Table 8 and figure 13 show the frequencies by component. As indicated, 2.7 percent (N=3) of those surveyed indicated they were Army National Guard officers, .9 percent (N=1) of those surveyed indicated they were Department of Defense employees, 3.5 percent (N=4) of those surveyed indicated they were International officers, 76.1 percent (N=86) of those surveyed indicated they were active duty Army officers, 8.8 percent (N=10) of those surveyed indicated they were U.S. Air Force officers, .9 percent (N=1) of those surveyed indicated they were U.S. Army Reserve officers, .9 percent (N=1) of those surveyed indicated they were U.S. Marine Corps officers, and 6.2 percent (N=7) of those surveyed indicated they were U.S. Navy officers.

Table 8. Component Table					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ARNG	3	2.7	2.7	2.7
	DoD	1	.9	.9	3.5
	IO	4	3.5	3.5	7.1
	USA	86	76.1	76.1	83.2
	USAF	10	8.8	8.8	92.0
	USAR	1	.9	.9	92.9
	USMC	1	.9	.9	93.8
	USN	7	6.2	6.2	100.0
	Total	113	100.0	100.0	

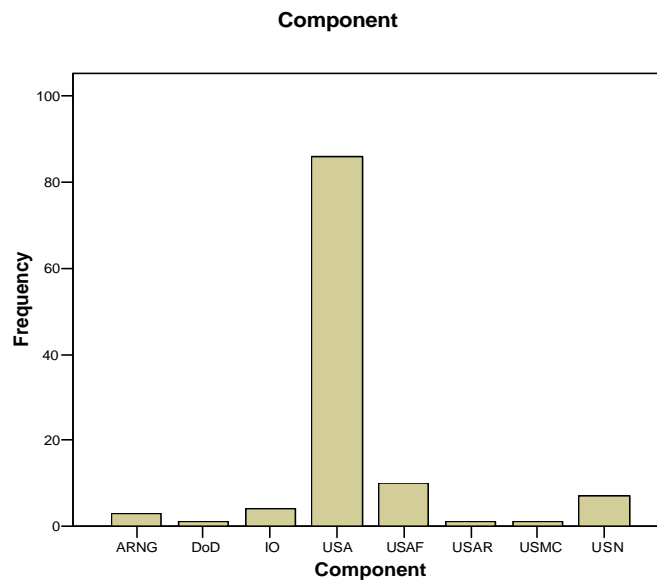


Figure 13. Component Bar Chart

As shown in table 9 and figure 14, 3.5 percent (N=4) of those surveyed provided an invalid response, 54.9 percent (N=62) of those surveyed indicated they did not have

major combat operations experience, and 41.6 percent (N=47) of those surveyed indicated they have major combat operations experience.

Table 9. Major Combat Operations experience Table					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Invalid	4	3.5	3.5	3.5
	N	62	54.9	54.9	58.4
	Y	47	41.6	41.6	100.0
	Total	113	100.0	100.0	

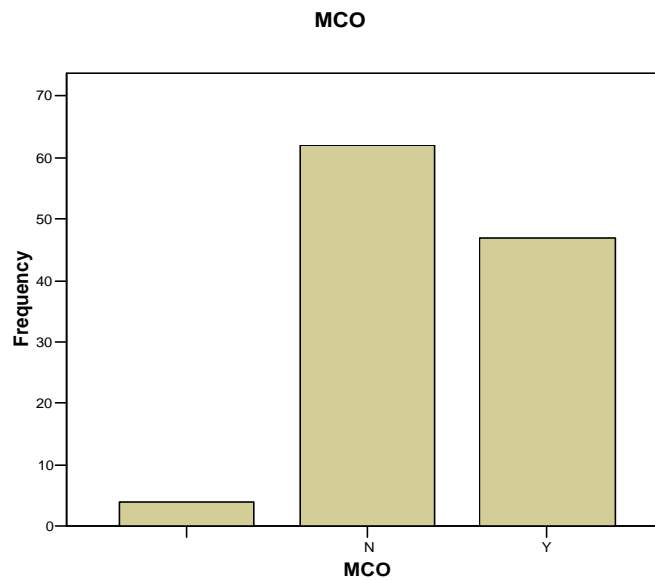


Figure 14. Major Combat Operations Experience Bar Chart

In table 10 and figure 15, 2.7 percent (N=3) of those surveyed provided an invalid response, 31.0 percent (N=35) of those surveyed indicated they did not know someone

who died while serving in the military, and 66.4 percent (N=75) of those surveyed indicated they knew someone who died while serving in the military.

Table 10. Personal Knowledge of a Death While in Military					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Invalid	3	2.7	2.7	2.7
	N	35	31.0	31.0	33.6
	Y	75	66.4	66.4	100.0
	Total	113	100.0	100.0	

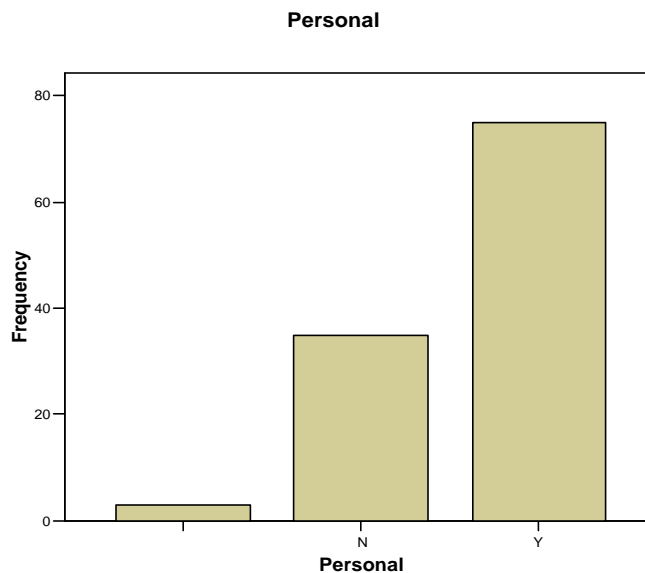


Figure 15. Personal Knowledge of a Death While in Military Bar Chart

Table 11 and figure 16 show service with or without mortuary affairs personnel. As indicated, 2.7 percent (N=3) of those surveyed provided an invalid response, 78.8 percent (N=89) of those surveyed indicated they have not served with mortuary affairs

personnel, and 18.6 percent (N=21) of those surveyed indicated they have served with mortuary affairs personnel.

Table 11. Service with Mortuary Affairs Personnel Table					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Invalid	3	2.7	2.7	2.7
	N	89	78.8	78.8	81.4
	Y	21	18.6	18.6	100.0
	Total	113	100.0	100.0	

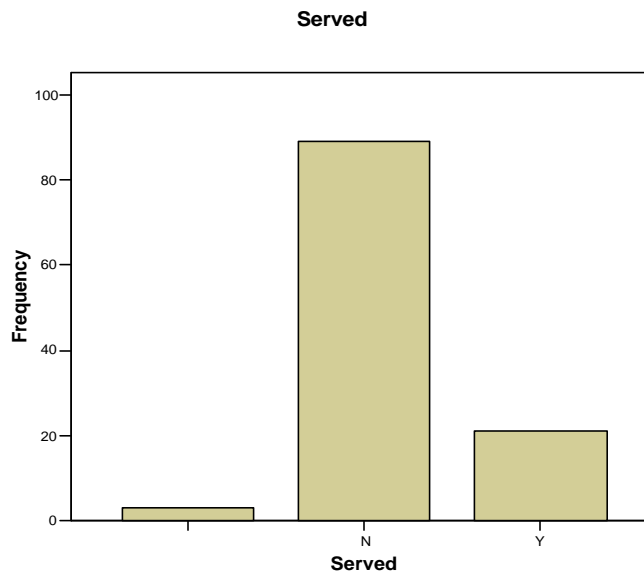


Figure 16. Service with Mortuary Affairs Personnel Bar Chart

### Section Three – Inferential Testing of the Null Hypotheses

The ten Null Hypotheses presented in chapter 2 were examined for possible differences based on variables of gender, age, marital status, child status, rank, the five

categories of branch, component of service, MCO, personal knowledge of a service member(s) who died while serving in the military, and service with mortuary affairs personnel, to determine whether or not differences existed. Either a t-test or an Analysis of Variance (ANOVA) was performed.

#### Null Hypotheses tested by T-Test

Null Hypothesis 1 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by gender.

As shown in tables 12 and 13, the results of the t-test on gender status found significant differences in three of the ten items at the .05 level of confidence (Q3,  $p = .000$ ; Q5,  $p = .001$ ; and Q10,  $p = .001$ ). The remaining seven items were not significant.

In question 3--The last unit that I was assigned to received a sufficient level of mortuary affairs training--results show ( $p = .000$ ) a significant difference in the respondents by gender. Male respondents indicated they significantly disagreed more with the statement that the last unit that they were assigned to received a sufficient level of mortuary affairs training ( $X = 3.63$ ) than their female counterparts ( $X = 3.44$ ).

In question 5--Unless NBC contamination occurs, I would not accept the temporary or permanent interment (burial) of U.S. service member's on foreign soil--results revealed a significant difference in the respondents by gender ( $p = .001$ ). Once again, male respondents indicated they significantly disagreed with the statement that they would not accept the temporary or permanent interment (burial) of U.S. service member's on foreign soil ( $X = 2.66$ ) as compared to female respondents ( $X = 2.00$ ).

In question 10--If I were killed and positively identified, my primary next of kin should be notified within (x) number of hours--results revealed a significant difference in



the respondents by gender ( $p = .001$ ). Male respondents selected a significantly longer period of time to notify the next of kin ( $X = 2.53$ ) than females ( $X = 1.89$ ).

Table 12. Null Hypothesis Gender Samples T-Test			
	Sig.	Mean Difference	Std. Error Difference
Q3 MA Training in my unit	.000	.181	.296
Q5 Interment of US personnel on non-US soil	.001	.663	.403
Q10 Notification Time for PNOK	.001	.645	.398

Table 13. Null Hypothesis Gender Mean Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Q3 MA Training in my unit	M	104	3.63	.778	.076
	F	9	3.44	1.509	.503
Q5 Interment of US personnel on non-US soil	M	104	2.66	1.187	.116
	F	9	2.00	.707	.236
Q10 Notification Time for PNOK	M	103	2.53	1.187	.117
	F	9	1.89	.333	.111

Null Hypothesis 2 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by marital status.

The results of the t-test on marital status failed to reject the null hypothesis at the .05 level of confidence. Therefore, no significant difference between attitudes exists in regards to marital status.

Null Hypothesis 3 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by a with/without child status.

As shown in tables 14 and 15, the results of the t-test on child status found significant differences in two of the ten items at the .05 level of confidence (Q1,  $p = .015$ ; and Q2,  $p = .005$ ). The remaining eight items were not significant.

In question 1--I have an understanding of what Mortuary Affairs processes occur in the event of a service member's death--results revealed a significant difference in the respondents by child status ( $p = .015$ ). Respondents with children significantly disagreed with the statement that they have an understanding of what mortuary affairs processes occur in the event of a service member's death ( $X = 2.51$ ) as compared to those who indicated that they did not have children ( $X = 2.18$ ).

In question 2--From my experience, Mortuary Affairs personnel perform their duties and mission in a professional manner--results showed a significant difference ( $p = .005$ ). Respondents indicating they had children significantly disagreed with the statement that mortuary affairs personnel perform their duties and mission in a professional manner ( $X = 2.25$ ) as compared to respondents indicating they did not have children ( $X = 2.06$ ).

Table 14. Null Hypothesis Children Samples T-Test			
	Sig.	Mean Difference	Std. Error Difference
Q1 Understanding of MA	.015	.334	.250
Q2 MA level of professionalism	.005	.191	.192

Table 15. Null Hypothesis Children Mean Statistics					
	Children	N	Mean	Std. Deviation	Std. Error Mean
Q1 Understanding of MA	Y	96	2.51	.984	.100
	N	17	2.18	.728	.176
Q2 MA level of professionalism	Y	96	2.25	.754	.077
	N	17	2.06	.556	.135

Null Hypothesis 4 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by component of service.

The results of the t-test on component of service failed to reject the null hypothesis at the .05 level of confidence. Therefore, no significant difference between attitudes exists in regards to component of service.

Null Hypothesis 5 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by major combat operations (MCO) experience.

The results of the t-test on MCO experience failed to reject the null hypothesis at the .05 level of confidence. Therefore, no significant difference between attitudes exists in regards to MCO experience.

Null Hypothesis 6 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by personal knowledge of someone who died while serving in the military.

As show in tables 16 and 17, the results of the t-test on personal knowledge found significant differences in one of the ten items at the .05 level of confidence. The remaining nine items were not significant.

In question 5--Unless NBC contamination occurs, I would not accept the temporary or permanent interment (burial) of U.S. service members on foreign soil-- results showed a significant difference in the respondents by personal knowledge ( $p =$

.001). Respondents indicating that they did not know someone who died while serving in the military significantly disagreed with the statement not accepting the temporary or permanent interment (burial) of U.S. service members on foreign soil ( $X = 2.66$ ) as compared to those who indicated that they knew someone who died while serving in the military ( $X = 2.60$ ).

Table 16. Null Hypothesis Personal Knowledge Samples T-Test			
	Sig.	Mean Difference	Std. Error Difference
Q5 Interment of US personnel on non-US soil	.001	-.057	.243

Table 17. Null Hypothesis Personal Knowledge Mean Statistics					
	Personal Knowledge	N	Mean	Std. Deviation	Std. Error mean
Q5 Interment of US personnel on non-US soil	Y	75	2.60	1.284	.148
	N	35	2.66	.938	.158

Null Hypothesis 7 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by service with Mortuary Affairs personnel.

The results of the t-test on service with mortuary affairs personnel failed to reject the null hypothesis at the .05 level of confidence. Therefore, no significant difference between attitudes exists in regards to service with mortuary affairs personnel.

### Null Hypotheses tested by Analysis of Variance (ANOVA)

Null Hypothesis 8 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by the 32 to 35 year old, 36 to 39 year old, 40 to 43 year old, and 44 to 47 year old age groups. The 48 + year old age group was dismissed due to only one respondent falling within this age group.

As shown in tables 18 and 19, the results of the ANOVA on age grouping found a significant difference in one of the ten items at the .05 level of confidence. The remaining nine items were not significant.

In question 3--The last unit that I was assigned to received a sufficient level of mortuary affairs training--results showed a significant difference in the 40 to 43 and the 44 to 47 year old age groups ( $p = .040$ ). Respondents indicating that they were between the ages of 40 to 43 years old significantly disagreed with the statement that the last unit they were assigned to received a sufficient level of mortuary affairs training ( $X = 4.00$ ) as compared to those who indicated that they were between the ages of 44 to 47 years old ( $X = 2.75$ ).

Table 18. Null Hypothesis Age Groups ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
Q3 MA Training in my unit	Between Groups	5.939	3	1.980	2.859	.040
	Within Groups	74.776	108	.692		

Table 19. Null Hypothesis Age Groups Mean Statistics					
	Age Groups	N	Mean	Std. Deviation	Std. Error
Q3 MA Training in my unit	32 to 35	43	3.63	.725	.110
	36 to 39	48	3.52	.922	.133
	40 to 43	17	4.00	.707	.171
	44 to 47	4	2.75	1.258	.629

Null Hypothesis 9 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by rank.

The results of the ANOVA on rank were dismissed due to a rather homogeneous sample population. The sample population of 113 people was made up of almost entirely (107) of pay grade 04's (rank = U.S. Army equivalent Major), with only four pay grade 03's (rank = U.S. Army equivalent Captain), one pay grade 05-06 (rank = U.S. Army equivalent Lieutenant Colonel/Colonel), and one pay grade GS13. Therefore, because of how homogeneous this population was, the results were dismissed.

Null Hypothesis 10 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by combat arms, combat support, combat service support, "other," and sister service branch groups.

As shown in tables 20 and 21, the results of the ANOVA on branch groups found a significant difference in three of the ten items at the .05 level of confidence (Q1  $p = .036$ , Q2  $p = .047$ , and Q9  $p = .013$ ). The remaining seven items were not significant.

In question 1--I have an understanding of what Mortuary Affairs processes occur in the event of a service member's death--results showed a significant difference in the combat service support and sister service branch groups ( $p = .036$ ). Respondents indicating that they were in the sister service branch group significantly disagreed with the statement that they have an understanding of what mortuary affairs processes occur in the event of a service member's death ( $X = 3.00$ ) compared to those who indicated that they were in the combat service support branch group ( $X = 2.07$ ).

In question 2--From my experience, Mortuary Affairs personnel perform their duties and mission in a professional manner--results revealed a significant difference in the combat service support and sister service branch groups ( $p = .047$ ). Respondents

indicating that they were in the sister service branch group significantly disagreed with the statement that from their experience, mortuary affairs personnel perform their duties and mission in a professional manner ( $X = 2.47$ ) compared to those who indicated that they were in the combat service support branch group ( $X = 1.89$ ).

Finally in question 9--Unit level mortuary affairs training reinforces service members belief that they will be cared for reverently in death--results showed a significant difference in the combat service support and sister service branch groups ( $p = .013$ ). Respondents indicating that they were in the sister service branch group significantly disagreed with the statement that unit level mortuary affairs training reinforces service members' belief that they will be cared for reverently in death ( $X = 2.94$ ) compared to those who indicated that they were in the combat service support branch group ( $X = 2.14$ ).

Table 20. Null Hypothesis Branch Groups ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
Q1 Understanding of MA	Between Groups	9.305	4	2.326	2.670	.036
	Within Groups	92.335	106	.871		
	Total	101.640	110			
Q2 MA level of professionalism	Between Groups	5.122	4	1.281	2.502	.047
	Within Groups	54.247	106	.512		
	Total	59.369	110			
Q9 MA Training and SM beliefs	Between Groups	7.888	4	1.972	3.322	.013
	Within Groups	62.330	105	.594		

Table 21. Null Hypothesis Branch Groups Mean Statistics					
	Branch Groups	N	Mean	Std. Deviation	Std. Error
Q1 Understanding of MA	Combat Arms	45	2.49	.869	.130
	Combat Support	15	2.53	1.060	.274
	Combat Service Support	28	2.07	.858	.162
	Other	6	2.50	.837	.342
	Sister Service	17	3.00	1.118	.271
Q2 MA level of professionalism	Combat Arms	45	2.33	.674	.101
	Combat Support	15	2.33	.724	.187
	Combat Service Support	28	1.89	.737	.139
	Other	6	2.00	.632	.258
	Sister Service	17	2.47	.800	.194
Q9 MA Training and SM beliefs	Combat Arms	44	2.27	.872	.132
	Combat Support	15	2.20	.561	.145
	Combat Service Support	28	2.14	.705	.133
	Other	6	2.17	.983	.401
	Sister Service	17	2.94	.659	.160

#### Section Four - Open-ended Responses

Having examined the statistical evidence from the opinion survey portion of the questionnaire in the previous section, this section of the chapter will be dedicated to the examination of the emerging trends or themes derived from the responses provided by the surveyed population for the open-ended questions. An interesting couple of points that must be addressed are that few of the respondents expressed a concern about how the entire mortuary affairs process would affect their family given their untimely death. This particular subject will be discussed in greater detail within chapter 5, Conclusions, under Recommendations for Further Study and Future Research Questions. Also, it appeared as though most respondents made the assumption that the U.S. military would have unrestricted access to the battlefields on which current and future battles will be fought.



A short perusal of U.S. history would quickly dispel this thought as it took over 50 years from the cessation of hostilities between the U.S. and the Democratic People's Republic of Korea to begin the recovery of U.S. remains.

#### Open-Ended Question One

The first open-ended question asked the respondent to express their feelings on how they believed emerging Objective Force Warrior (OFW) type technologies and systems would impact future recovery of remains and the notification aspects of mortuary affairs. Slightly more than one half of the respondents expressed a familiarity with the OFW technology, yet most agreed that new technologies would in some way assist in the recovery, identification and notification processes. Most respondents believed that with the implementation of Global Positioning System (GPS) type devices as part of the OFW system, the entire process would be simpler. GPS, which becomes more commonplace each year, will, they believe, dramatically reduce the difficulty associated with the recovery process by increasing the likelihood of locating the remains more quickly and efficiently.

Along with this one main emergent theme, several other interesting points were raised. One point was the overall cost and importance placed on the OFW "suit" itself. A small percentage of respondents felt that because the OFW suit would include such a high degree of technology on a human soldier based system, the importance of recovering the suit could be construed as being greater than the importance of the soldier's recovery. A few expressed the hope that these future systems, whether the OFW concept or other new technology, would do more to keep the soldier alive, thereby decreasing the need for recovery of deceased soldiers. The final point concerned the added weight of every "good

idea” technology that could be added to the OFW concept and suit. Several respondents felt that the human soldier still lay at the heart of the OFW concept and that each additional item, no matter how great its importance may play in the overall success of the soldier, may continue to add weight to a soldier burdened system. All three of these topics have their importance and can be addressed as OFW and “like” systems are further developed.

#### Open-ended question two

The second open-ended question asked the respondent to give their feelings on how far the military should go in its attempts to recover their remains should they die while in combat. Interestingly enough, well over three-quarters of the respondents almost demanded that no other soldier should be put at risk in the attempt to recover their remains. These respondents felt that to put an additional soldier at risk was “silly,” “ludicrous,” or “a waste of human resources.” However, many, of these same personnel believed that attempting to recover those designated as Prisoners of War (POW) or Missing In Action (MIA) did warrant such a weighted risk. Again, approximately two-thirds of respondents felt that a recovery should only be attempted when it had little to no impact on the current war-fighting mission. The third major point derived from the responses was that of leaving the decision to attempt a recovery of remains up to the commander “on the ground” and not being tied to a policy directing the recovery of all remains regardless of the circumstances. Most of these respondents cited the acronym METT-TC (Mission, Enemy, Terrain, Troops available – Time, Civilian considerations), as the primary factors to consider in determining how a recovery mission should be planned and conducted.

In contrast to the first open-ended question, few if any minor topics came to light as a result of the second open-ended question. However, there was a distinct minority that seemed to demand that recovery of remains occur immediately regardless of the hazard to recovery personnel. Many of these respondents felt that all available resources should be expended to make this recovery a success. This was obviously the most divisive question posed of the four open-ended questions on the questionnaire.

#### Open-ended question three

The third open-ended question asked the feelings of the respondent on how emerging global communications capabilities and the proliferation of media on the battlefield would either preclude or enhance the proper notification of the PNOK as the available time period shrinks. By far, this question elicited the greatest response in terms of personal feelings. Well over half of the respondents felt that the increase in the global communications reach and the numerous resources available to the soldier on the battlefield would clearly enhance the notification process. This, the respondents felt, would occur due to pressure being placed on the notification process itself. Two factors in particular would be the leading causes of this pressure. The first factor would be an almost unlimited access of the media to real time reporting, both voice and video. The second factor would be the technological leaps that the military would make to assist in the acceleration of the notification process itself. Great lengths were taken in the discussion of the accuracy aspect of the notification process as almost all respondents were well aware of the importance in getting the facts one hundred percent correct the first time. A small minority also discussed the coordination and agreements that needed to occur between the media and the U.S. commanders on the ground.

One recent article on CNN.com underscores this point exactly. The article, How families learn of military deaths in Iraq, dated 30 November 2003, belabors the point of how a family was informed that their son had been badly wounded in Iraq. The family expressed great frustration in learning, over twenty hours after notification that he had been wounded, that their son had died. Their complaint lies with the perceived inability to reach someone who has the information regarding their son's death and the seemingly slow pace of receiving information (CNN.com 2003, 1).

Unfortunately, there appears to be a minor amount of misunderstanding over this third open-ended question. A small minority of respondents felt that the question led them to believe that the media would or could be asked to play a role in the notification process. Even with this misunderstanding, some respondents felt that the media could play a role in the notification process as long as the current military processes were followed.

#### Open-ended question four

The fourth open-ended question provided the respondent the opportunity to express their own views on MA, either previously unsolicited or in greater detail than had been addressed previously in the questionnaire. Many themes were readdressed in this area; however, several other new minor themes surfaced. One of these minor themes was that of how the respondents' families would be directly impacted by their recovery, or lack thereof. A second minor theme addressed the aspect of cremation of remains and/or the possibility of the donation of organs from a deceased service member. These two issues will be addressed in chapter 5. The one overriding theme for this particular

question was the overall appreciation that the respondents had for those mortuary affairs personnel who perform this unheralded mission without reservation.

### Summary

In summary, chapter 4 presented the results of the data analysis of the questionnaire utilized to survey the population. The results were presented in four sections of the chapter. The first section presented the internal reliabilities of the measurements in the survey. The second section presented the descriptive statistics and the frequency results for the category variables of the survey. The third section presented the inferential testing of the hypotheses regarding differences in the control variables. The final section presented the qualitative examination of the open-ended responses regarding the future of mortuary affairs within the military services. This qualitative examination of open-ended responses provided several emergent themes that will be addressed further in chapter 5.

## CHAPTER 5

### CONCLUSIONS

This chapter will provide the conclusions of the Null Hypotheses, make recommendations for further study, provide several possible future research questions, and will summarize the thesis in general.

#### Conclusions of the Null Hypotheses

Following the review of the literature in chapter 2, ten Null Hypotheses emerged. These Hypotheses were tested through the use of a survey instrument as described in chapter 3. The findings of those tests, whether from the use of the t-test or the ANOVA, were presented in chapter 4. Conclusions from the testing of these Null Hypotheses and the findings are now presented.

Null Hypothesis 1 - There will be no differences between attitudes in regards to Mortuary Affairs when compared by gender. The results of the t-test found significant differences in three of the ten items at the .05 level of confidence.

As in question three male respondents felt that the last unit they were assigned to received a sufficient level of mortuary affairs training as compared to females. There are a couple of plausible explanations for this finding. One explanation may be that most combat arms units are predominately male dominated units. These male dominated combat arms units are the units that will likely be involved in direct combat operations when deployed in war. Combat operations are defined as the operations and missions having a primary focus of conducting offensive operations to seek and destroy the enemy, or to defend against a direct enemy attack. These units may therefore be the units most

likely to desire and conduct mortuary affairs training given the inherent dangers associated with their missions and operations placing them in more dangerous situations.

The male psyche may feel that they can cope with death more easily than women and therefore desire less actual training to make them feel competent in mortuary affairs related skills. This explanation would therefore offer that male dominated units would require less actual training to give the trainees the same general feeling of competency as a more female integrated or female dominated unit. An explanation for this difference in how males and females view death is found in several publications on death and gender. Ardelts argues that males are more accepting of death than females (Ardelt 2000, 10).

The developing changes in the contemporary operating environment (COE) may alter this perception and the reality. Military operations such as OIF and OEF now show that more and more “rear echelon” units, predominately thought of as combat service support units, are receiving direct fire from enemy forces. This change is due to the non-linear nature of battles currently being fought in Iraq and Afghanistan. These combat service support units have, on-average, a higher percentage of females assigned than either the combat support or combat arms branches and may account for the differences in the belief that their units received a sufficient level of mortuary affairs training.

In question five, males significantly disagreed with the statement that they would not accept the temporary or permanent interment (burial) of U.S. service members on foreign soil as compared to females.

One explanation of this may be due to a larger issue of how males and females view death, and more importantly, their own death, as stated previously. Even so, given the relative position of the male dominated military as a whole, males may be those most

likely to see a comrade die while in direct combat. Again, the male dominated combat arms branches may account for this difference, as males are the only gender allowed/authorized in direct combat positions. This “authorization” of males in direct combat positions fosters a theory of John D. Morgan. Morgan, in an article titled Attitudes toward Death, defines the parameters of contemporary death attitudes. One of the four parameters described by Morgan is Exposure to Death. He theorizes that a greater exposure to death allows for a greater acceptance of death (Morgan 2004).

Finally, in question ten, males significantly chose a longer time period for notification of primary next of kin (PNOK). As noted previously, this difference may be accounted for in the larger issue of how males and females view death, or their own death. However, the results may be explained by the fact that male dominated units (combat arms) are more likely to take catastrophic casualties while conducting their mission(s), or participate in operations resulting in the death of a service member, while conducting their mission(s). The success of these combat arms missions may not always allow for the rapid search and recovery of remains, thus making possible quicker identification of all personnel given the extreme violence, length, remote locations, and degree of fighting that may occur. Those units having a higher percentage of females, combat support or combat service support, may have a greater ability to conduct the search and recovery of all remains, increasing the likelihood of rapid identification, than the more male dominated units.

Null Hypothesis 2 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by marital status. The results of the t-test on marital status failed to reject the null hypothesis at the .05 level of confidence. Therefore, no



significant difference between attitudes exists in regards to marital status. This may be due to the fact that marriage, in and of it self, does not alter the expectations of mortuary affairs in general.

Null Hypothesis 3 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by a with/without child status. The results of the t-test found significant differences in two of the ten items at the .05 level of confidence.

In question one, those who indicated that they did have children significantly disagreed with the statement that they have an understanding of what mortuary affairs processes occur in the event of a service member's death. One possible reason for this difference may be due to the fact that because they have children, they are more concerned with the process and how it would affect their children should they die while in military service. Those respondents who indicated that they did not have children may be less concerned with understanding the processes because of the lack of children and the inherent effects thereof.

In question two, those who indicated that they had children significantly disagreed with the statement that mortuary affairs personnel perform their duties and mission in a professional manner. As in the answer stated for question one, this may be due to the fact that because they have children, and given their previous experience, they are more concerned with the level of professionalism exhibited by mortuary affairs personnel. This may not be a direct reflection of the work that the mortuary affairs personnel actually do but more an expectation that the respondents have for a high degree of professionalism from these personnel.

Null Hypothesis 4 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by component of service. The results of the t-test on component of service failed to reject the null hypothesis at the .05 level of confidence. Therefore, no significant difference between attitudes exists in regards to component of service. This may be due to the fact that component of service does not alter the expectations of mortuary affairs in general.

Null Hypothesis 5 - There will be no differences between attitudes in regards to Mortuary Affairs when compared by major combat operations (MCO) experience. The results of the t-test on MCO experience failed to reject the null hypothesis at the .05 level of confidence.

Therefore, no significant difference between attitudes exists in regards to MCO experience. This lack of a significant difference may be due to the fact that not all U.S. major combat operations have resulted in a large number of casualties and deaths. (This statement is made in the context of comparing those personnel killed in action as a result of the American Civil War, World War II and many other more recent operations in Haiti, Somalia, and Desert Storm. This in no way is meant to diminish those persons who died as a result of one of these other more recent operations). The respondents, those with and those without MCO experience may not see a vast difference in the role of mortuary affairs.

Null Hypothesis 6 - There will be no differences between attitudes in regards to Mortuary Affairs when compared by personal knowledge of someone who died while serving in the military. The results of the t-test on personal knowledge found significant differences in one of the ten items at the .05 level of confidence.

In question five, those who indicated that they did not have personal knowledge of someone that died while in the U.S. military service felt they would not accept the temporary or permanent interment (burial) of U.S. service members on foreign soil. These respondents may reject this Hypothesis because the respondents have not been directly affected by the death of someone with whom they knew who died while in U.S. military service. The death of a close friend or acquaintance has not brought the reality of death to these respondents. By utilizing Morgan's theory of exposure to death, acceptance of death, one can see that people who have known someone who died while in U.S. military service are more accepting of having them temporarily or permanently buried on foreign soil (Morgan 2004).

Null Hypothesis 7 – There will be no differences between attitudes in regards to Mortuary Affairs when compared by service with Mortuary Affairs personnel. The results of the t-test on service with mortuary affairs personnel failed to reject the null hypothesis at the .05 level of confidence. Therefore, no significant difference between attitudes exists in regards to service with mortuary affairs personnel. This may be due to the fact that service with mortuary affairs personnel does not alter the expectations of mortuary affairs in general.

Null Hypothesis 8 - There will be no differences between attitudes in regards to Mortuary Affairs when compared by the 32 to 35 year old, 36 to 39 year old, 40 to 43 year old, and 44 to 47 year old age groups. The 48 + year old age group was dismissed due to only one respondent falling within this age group. The results of the ANOVA on age grouping found a significant difference in one of the ten items at the .05 level of confidence.

In question three, those respondents who indicated that they were between the ages of 40 to 43 years old significantly disagreed with the statement that the last unit they were assigned to received a sufficient level of mortuary affairs training compared to those who indicated that they were between the ages of 44 to 47 years old. These younger 40 to 43 year old respondents may feel that they did not receive a sufficiently high enough degree of mortuary affairs training in their last unit based on lessons they learned in previous U.S. military operations. This particular group of respondents, many of whose last units would have been at the battalion or lower level, may feel that given previous military operational experience such as Operation Desert Shield/Storm, Operations in Somalia, or more recent operations such as OEF or OIF, that the current level of mortuary affairs training is insufficient. These findings may show a clear contrast between those personnel whose last unit was at the battalion level and those respondents, older in age, who are still in the service of the military as an instructor at the U.S. Army CGSS or have been away from battalion level and below unit assignments for an extended period of time.

Another possible theory is given by Paul A Twelker, in his article *The Relationship Between Death Anxiety, Sex and Age*. In this article Twelker argues that older persons have a lower level of death anxiety than do younger persons. Taking into consideration the possibility that the 44 to 47 year old age group is nearing the end of their military careers, or have a difference of feelings given the likelihood that they have enough years to allow them to retire, this age group may feel they have received a sufficiently high enough level of mortuary affairs training in their last unit whereas the younger 40 to 43 year old age group shows a greater concern to receive a high degree of

training as they have not reached retirement age and plan to continue to serve in the military (Twelker 2004).

Null Hypothesis 9 - There will be no differences between attitudes in regards to Mortuary Affairs when compared by rank. The results of the ANOVA on rank were dismissed due to a rather homogeneous sample population. The use of rank in this instance could not provide a discriminator within the study.

Null Hypothesis 10 - There will be no differences between attitudes in regards to Mortuary Affairs when compared by combat arms, combat support, combat service support, "other," and sister service branch groups. The results of the ANOVA on branch groups found a significant difference in three of the ten items at the .05 level of confidence.

In question one--I have an understanding of what Mortuary Affairs processes occur in the event of a service member's death--results show a significant difference in the combat service support (CSS) and sister service branch groups. Respondents indicating that they were in the sister service branch group significantly disagreed with the statement that they have an understanding of what mortuary affairs processes occur in the event of a service member's death compared to those who indicated that they were in the combat service support branch group. This disparity between the sister service and U.S. Army CSS personnel should be somewhat self explanatory in that mortuary affairs is a sub-set mission of the Quartermaster Corps, a CSS unit, and is by definition a CSS type mission. The respondents who indicated that they are CSS should have, by this point in their military careers, been exposed to a greater degree of mortuary affairs training or issues than their sister service counterparts.

In question two--From my experience, mortuary affairs personnel perform their duties and mission in a professional manner--the results show a significant difference in the CSS and sister service branch groups. Respondents indicating that they were in the sister service branch group significantly disagreed with the statement that from their experience, mortuary affairs personnel perform their duties and mission in a professional manner compared to those who indicated that they were in the CSS branch group. As in the findings from question one, CSS personnel are more likely to be familiar with the training given and mission requirements of mortuary affairs units and personnel. The sister service branch group is more likely to be less informed about mortuary affairs personnel than their U.S. Army CSS counterparts.

In question nine--Unit level mortuary affairs training reinforces service members' belief that they will be cared for reverently in death--the results show a significant difference in the CSS and sister service branch groups. The sister service branch group respondents indicated they significantly disagreed with the statement that unit level mortuary affairs training reinforces service members belief that they will be cared for reverently in death as compared to those who indicated that they were in the combat service support branch group. This finding continues to conceivably support the findings listed previously for questions one and two. This then appears to show that CSS respondents believe that through conducting mortuary affairs training, the trained individuals will have a greater belief that they will be cared for reverently in death. As in the previous findings, this may be due to the emphasis made to U.S. Army soldiers given a more direct ground combat role on past, present, expected future battlefields.

### Conclusions of the Research Questions

Following the review of the literature in chapter 2, two research questions emerged. These two research questions were examined and conclusions are offered:

Research Question 1. Given the contemporary operating environment (COE) the U.S. military operates in now, the “no one left behind” culture, and the effects of mass media and global communications, what future changes will be demanded within mortuary affairs?

The literature review and research conducted indicates that the U.S. cultural environment requires an almost uncompromising ability to account for its men and women serving in the military branches of their nation. The U.S. Army and the mortuary affairs community in general need to develop better technological or other advanced systems that will greatly enhance the current processes in place regarding the search, recovery, identification, and notification of remains. These systems are needed to keep up with the rapidly changing environment in which both the U.S. Army and the U.S. military operate under. This rapid deployment, strike hard, strike fast, go anywhere mentality will continue to stress increased capabilities in all facets of mortuary affairs operations.

Research Question 2. Does the multi-service mortuary affairs training being conducted at Fort Lee, Virginia, enhance the “Joint mortuary affairs” concept and doctrine, given the U.S. Army’s role as Executive Agent for mortuary affairs?

Again, research now shows that the U.S. military services view the remains recovery process strikingly different in the degree of effort and resources which should be expended in the attempt to locate, recover, and identify the particular branch service member’s remains to the PNOK. As shown in Figure 21, and discussed in the findings of

Null Hypothesis 8, those who indicated that they were in the sister services branch of the five branches, felt that they did not have an understanding of what mortuary affairs processes occur in the event of a service member's death, did not feel that mortuary affairs personnel performed their duties and mission in a professional manner, and did not feel that unit level mortuary affairs training reinforces service member's beliefs that they will be cared for reverently in death. This was not just compared to the combat service support branch as given in Null Hypothesis finding, but as compared to the remaining four branches.

This difference in overall expectations needs to be addressed on a joint level with the U.S. Army taking the lead as executive agent for mortuary affairs. Meeting the particular demands and expectations of all of the U.S. military services, and the formation of clear, coherent, and operationally feasible joint guidance, should be a top priority for the U.S. Army mortuary affairs community as the executive agent.

#### Recommendations for Further Study

Research shows that it is those civilian organizations seeking the return of all U.S. military service personnel as well as civilians serving in support of military actions, that have traditionally continued to most vociferously pledge to seek the return of as many of the fallen as possible. This level of recovery expectation has risen as technology and government-to-government cooperation has increased over time as evidenced in the increase of recovery operations in the Democratic People's Republic of Korea over the past eight years.

The first recommendation for further study would involve an even wider population of military and civilian personnel. With each passing month, more and more



military personnel and civilian contractors are deployed in support of OIF, OEF, as well as a host of other “minor” operations all over the globe. This high deployment rate of military, whether they come from the Active Duty, Army National Guard, or U.S. Army Reserve forces, as well as their civilian personnel counterparts, rapidly changes the population and thus the responses from which assumptions are derived. These most recently deployed personnel, along with those seemingly yet to deploy, or those new to the service, may serve to be a driving voice of change, prove that the systems in place are adequately meeting the needs of the services, or any combination thereof.

A second recommendation for further study involves the families of these same personnel as indicated in recommendation one. As noted several times within this thesis, many civilian organizations have played and continue to play a significant part in the evolution of mortuary affairs and the entire mortuary affairs community process as defined in chapter 2. How these families handled the deployment, possible deployment, or service during a period of war, can serve to create new demands on a proven system. How the military services react to these possible new demands could influence future changes in the mortuary affairs community for years to come.

The third and final recommendation for further study revolves around two courses of action regarding the survey population utilized for this thesis. This future study, conducted five years from the publishing of this document (to allow for changes in U.S. and global military operations), would again utilize CGSC school year personnel and their opinions on similar questions as those posed for this thesis. A secondary course of action, similar to the follow-up study described prior, is a yearly study of the opinions of each CGSC school year personnel for the next five years (similar reasoning). This would

allow the researcher(s) to determine if a new pattern from a similar population is emerging given possible change(s) in operational tempo, deployments, escalation or cessation of current wars, U.S. and global politics, or other unforeseen events.

### Future Research Questions

The previous paragraphs provide a list of research topics for further or future study. Within this paragraph is a list of possible future research questions that include but is not limited to topics this research uncovered as areas playing a distinct role in the evolution of mortuary affairs. The following list is provided in the same five areas of research that were developed in the conduct of the research for this thesis and described in chapter 3 of this thesis:

#### Mortuary Affairs Training:

1. What future training for Mortuary affairs personnel of all services needs to be developed to speed up the identification and recovery of personnel from the battlefield?
2. What can be done to ensure units receive the “appropriate” level of mortuary affairs type training or familiarization prior to future deployments into combat or “non-hostile” remote locales where death may occur?

#### Notification of Primary Next of Kin:

1. When will systems or technologies such as the DCIPS-MAATS be implemented, thus expediting the notification process?
2. What information is completely necessary to provide Casualty Assistance Officers the required information to begin the notification of the PNOK and what technology exists to speed this process, given the sensitivity and required 100 percent accuracy?

3. How will a greater “joint” military-civilian operations outlook change the notification procedures for all personnel, whether they are military, civilian, contractor or third party national?

#### Recovery of Remains:

1. How would the non-recovery of killed-in-action (KIA) personnel in your command, company, platoon, or section (as applicable) affect the morale of your unit?

2. How would the non-recovery of these same killed-in-action personnel affect the morale of the families of the service men and women at the unit’s home station?

3. What doctrinal changes or emerging equipment advances need to occur to better assist in the recovery of remains than what is currently being pursued?

4. How will topics such as a service members’ personal choice for cremation of their remains or donation of their vital organs be handled in the future?

#### Technology as applied to Mortuary Affairs:

1. Objective Force Warrior type technologies are being pursued to ensure the viability of the service member and to give the on-ground commanders a greater degree of battlefield clarity regarding location and status of personnel. What additional systems or alterations to those systems being included now, need to occur to assist the mortuary affairs community in the pursuit of their responsibilities?

#### Identification of Remains:

1. What steps, be it scientific, technological, administrative, or other(s), can the military services take now to better ensure that service members are positively identified in the future given such scientific advancements as the use of Mitochondrial DNA in the identification of personnel from previous wars?

2. What degree of infringement to personal privacy will U.S. military personnel allow to ensure that their remains are positively identified?

### Summary

The spectrum of operations facing the U.S. military has continued to evolve and change with advances in technology, global politics, as well as many other factors. Research has shown that mortuary affairs operational capabilities, policies, tactics, techniques and procedures, have evolved along with these changes at a sometimes uneven pace to provide around the world recovery of remains capabilities in almost any environment, altitude, locale, etc... In some fashion and with varying degrees of initial success, this capability has existed regardless of the conflict.

Given the existing mortuary affairs capability, research question 1 asked what future changes would be demanded within mortuary affairs. The COE the U.S. military is operating in now, the “no one left behind” culture, and the effects of mass media and global communications, are just a couple of the driving factors behind the changes that are to occur. Research shows that communication technologies as applied to mortuary affairs will most certainly improve. This communications leap will provide a greater degree of casualty tracking fidelity on the battlefields of tomorrow. The network centric architectures being emplaced today make this an almost forgone conclusion. The timeframe in which this occurs and how it will affect the continued evolution of mortuary affairs, given the U.S. military’s current operational tempo, will be difficult to predict. However, the application of emerging technologies, U.S. joint or coalition operations, and many other internal and external factors, will certainly provide a formidable test.

If it appears that research question 1 will most likely be answered in some part by advancing technologies, research question 2 it appears, will most likely be answered by the people. Research question 2 asked if the multi-service mortuary affairs training being conducted at Fort Lee, Virginia, enhances the “joint mortuary affairs” concept and doctrine, given the U.S. Army’s role as Executive Agent for mortuary affairs. From the findings in this paper, it appears that this training may be helping bridge the gap between the joint concept and doctrine, but it has not completely closed the chasm. It could be said that this only represents a microcosm of the U.S. military as a whole, as the military continues its march towards a greater “jointness”; however, the devotion by military and family members continues to play a larger role in this more human aspect of the military. The “mission first” attitude has apparently lessened the drive, if it was ever at a higher level, to immediately recover fallen comrades if significant risk of injury or death to recovery personnel is possible.

This research has shown, however, that military service personnel place an extremely high regard on the recovery and respectful care of their fallen comrades. This research has also shown that it is the families and civilian counterparts who continue to pursue and demand a complete accounting for the dead of past U.S. wars and conflicts. Regardless of who, how and why, it is the underlying fact that none who have fallen will be forgotten.

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